THE CARE AND TREATMENT OF MENTAL DISEASES AND WAR NEUROSES ("SHELL SHOCK") IN THE BRITISH ARMY

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INTRODUCTION

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INTRODUCTION

NO medico-military problems of the war are more striking than those growing out of the extraordinary incidence of mental and functional nervous diseases ("shell shock"). Together these disorders are responsible for not less than one seventh of all discharges for disability from the British Army, or one third if discharges for wounds are excluded. A medical service newly confronted like ours with the task of caring for the sick and wounded of a large army cannot ignore such important causes of invalidism. By their very nature, moreover, these diseases endanger the morale and discipline of troops in a special way and require attention for purely military reasons. In order that as many men as possible may be returned to the colors or sent into civil life free from disabilities which will incapacitate them for work and self-support, it is highly desirable to make use of all available information as to the nature of these diseases among soldiers in the armies of our allies and as to their treatment at the front, at the bases and at the centers established in home territory for their "reconstruction."

England has had three years' experience in dealing with the medical problems of war. During that time opinion has matured as to the nature, causes and treatment of the psychoses and neuroses which prevail so extensively among troops. A sufficient number of different methods of military management have been tried to make it possible to judge of their relative merits. My visit to England was for the purpose of observing these matters at first hand so that I might contribute information which might aid in formulating plans for dealing with mental and nervous diseases among our own forces when they are exposed to the terrific stress of modern war.

Acknowledgments

I wish, at the outset, to record my appreciation of the many courtesies which enabled me to use the limited time at my disposal to the best advantage. The Army Council, upon the request of Ambassador Page, agreed to place at my disposal every facility for studying mental and nervous diseases. The medical officers of the special hospitals for mental and nervous cases, through the courtesy of Sir Alfred Keogh, Director General of the Royal Army Medical Corps, gave me opportunities to

observe the work of the institutions under their charge. Others actively engaged in dealing with various administrative and clinical phases of these problems not only gave me valuable information but very kindly offered suggestions as to practical means by which our army might profit by the experience of British medical officers. I would mention especially Lt. Colonel William Aldren Turner, the principal advisor to the government in these matters; Lt. Colonel Sir John Collie, President of the Special Pension Board on Neurasthenics; Sir William Osler, under whose direction work is carried on in the special hospital for functional disorders of the heart; Dr. C. Herbert Bond of the Board of Control; Dr. Henry Head, who represented the Medical Research Committee in the conference upon nervous diseases among soldiers, held in Paris in April, 1916; Dr. H. Crichton Brown who has prepared a thoughtful memorandum on the subject for the War Office; Lt. Colonel Sir Robert Armstrong-Jones and the American liaison officers in London—Brigadier General Bradley and Lt. Colonel Lyster of the army and Surgeon Pleadwell of the navy. Dr. William Morley Fletcher, Secretary of the Medical Research Committee, which from an early period in the war has directed attention to the importance of nervous diseases, presented me with a motion picture film showing some of the more common symptoms in soldiers suffering from the neuroses. Dr. John T. MacCurdy, Associate in Psychiatry at the New York State Psychiatric Institute, who was studying the war neuroses in special hospitals in London, very kindly visited the Moss Side Military Hospital at Maghull and the Craiglockhart Hospital for officers, near Edinburgh, and furnished me with reports on the facilities for treatment at these institutions.*

It is impossible to examine closely any phase of the work of caring for disabled soldiers in Great Britain without being profoundly impressed with the high degree of executive and scientific skill with which the unprecedented medical problems of the war have been met. More than twice as many hospital beds have been provided for soldiers and sailors as existed in the whole United Kingdom in August, 1914, for the civil population. In the stress of war, with all difficulties immensely increased, special types of treatment have been provided which the most enlightened civil communities had not yet been able to supply in time of peace. These almost incredible achievements were made possible by the patriotic efforts with which the nation disposed of obstacles in every direction. Beneath all this work is the deep sympathy which officials and the public alike bestow upon all those returning from the front who are in need of care or attention.

*Appendix III.

Scope of Report

I have omitted entirely from this report any account of the treatment of organic nervous diseases and of injuries to the central nervous system or the peripheral nerves. Organic nervous diseases are not especially frequent and seem to present no special military problems. Injuries of the central nervous system are frequent and severe. Those that do not prove fatal very quickly are well cared for at first in general surgical wards where the services of neurologists and neurological surgeons are available and later in special hospitals or special hospital wards. A very serious difficulty in dealing with destructive brain and cord lesions is that the patients sooner or later pass from hospitals in which special care and nursing are provided to their homes or to poorly equipped auxiliary hospitals in which many soon get worse or die. Injuries to the peripheral nerves are frequent and important, in fact there are few extensive injuries to the extremities in which important nerves escape. With neurological advice, the surgeons deal with these cases successfully in the base hospitals and their after-treatment is well carried on in the "reconstruction centers" for orthopedic cases. Neither of these classes of injuries concerns us especially in a consideration of the treatment and military management of mental and functional nervous diseases, except for the fact (to be commented upon later) that the treatment of the war neuroses might be carried out advantageously in home territory in co-operation with orthopedic reconstruction centers.

Although the problems presented by mental and functional nervous diseases have many clinical and administrative features in common and although these disorders should be dealt with by medical officers with the same kind of special training, it seems desirable to consider their treatment in England separately in this report.

My observations as to the nature of the neuroses met with in war are based partly upon a study of the very extensive literature upon this subject which has come into existence since the commencement of the war,* but chiefly upon personal conversation with medical men engaged in treating these cases in England. It is almost needless to say that during a short period spent largely in securing information regarding facilities for treatment and administrative methods of management and in examining special hospitals for the care of these cases, I had no opportunity to make original clinical observations, although I saw and examined superficially many cases of all degrees of severity.

*Appendix I.

I. MENTAL DISEASES (INSANITY)

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Prevalence

MILITARY life has well been called the "touchstone of insanity" on account of the high prevalence of mental diseases in armies even during peace. Medical statistics of the present war are as yet untabulated and so it is impossible to state the rate per thousand for mental diseases. The only means of estimating their incidence is by considering the number of cases diagnosed officially as "insane" in the military hospitals at a given time. On March 31, 1917, about 1.1 per cent of all patients in military hospitals of Great Britain were officially diagnosed as insane. The percentage among expeditionary patients was 1.3 and among non-expeditionary patients 1.1. The enormous prevalence of wounds in patients from the expeditionary troops reduces the percentage of all other conditions and so the excess of mental cases among expeditionary cases is much greater than is apparent. Among non-wounded expeditionary patients the percentage was about three times that among the non-expeditionary cases. The rate among officers was only one third that among men in expeditionary patients and about the same in non-expeditionary patients. This has an important bearing upon the fact that the rate for the war neuroses ("shell shock") is four times as high among officers as among men. About 6,000 patients are admitted annually from both the expeditionary and non-expeditionary forces to the special military hospitals for the insane. As one such hospital with a large admission-rate is a "clearing hospital" and distributes its patients to other special hospitals, some patients are obviously counted twice in the only statistics available. To offset this is the fact that a much larger number of mental cases do not go to special military hospitals at all but are discharged to friends, with or without an official diagnosis of insanity, or are sent directly to local institutions for the insane. This is the rule in the case of non-expeditionary troops. It can be estimated, from all the data available, that the annual admission rate is about 2 per 1,000 among the non-expeditionary troops and about 4 per 1,000 among expeditionary troops. The rate in the adult, male, civil population of Great Britain is about 1 per 1,000.

There is statistical evidence which indicates that the insanity rate in the British Army is less at the present time than it was in the first year of the war, and that it has not reached some of the high rates reported in recent wars. The high and constantly increasing rate for the war neuroses suggests that the latter disorders are taking the place of the psychoses in modern war. How much this phenomenon is due to an actual change in incidence and how much to former errors in diagnosis cannot be stated accurately. There is a strong suspicion that the high insanity rate in the Spanish-American War and the Boer War, and perhaps in earlier conflicts, was due, in part at least, to failure to recognize the real nature of the severe neuroses, which are grouped under the term "shell shock" in this war. This may account for the remarkable recovery rate among insane soldiers in other wars. It is certain that in the early months of the present war many soldiers suffering from war neuroses were regarded as insane and disposed of accordingly. When one remembers that the striking manifestations seen in these cases are unfamiliar in men to physicians in general practice, it is not surprising that some of the severer disturbances should have been interpreted as signs of insanity. The benign course and rapid recovery of many of these cases upon their return to England, together with increasing familiarity with the symptoms of functional nervous diseases, soon enabled the medical officers serving with troops to recognize their real nature. Even at the present time, however, it is by no means rare for soldiers with functional nervous diseases to be sent to England as insane or for insane soldiers to be sent to hospitals for the war neuroses. This is shown by the records of the Red Cross Military Hospital at Maghull, a hospital for the treatment of war neuroses. Since this hospital was opened, ten per cent of the 1,749 patients admitted* were found to be suffering from mental diseases and sent to hospitals for the insane. On the other hand, twenty per cent of the 6,755 patients received* from France since the commencement of the war at "D Block" of the Royal Victoria Hospital at Netley, a clearing hospital for mental cases, were subsequently sent to hospitals for functional nervous diseases. On the whole it may be said that medical officers serving with troops are constantly becoming more familiar with

*To May 31, 1917.

the symptoms of functional nervous diseases and that fewer such errors now occur.

Treatment

The return to England of considerable numbers of mental cases, commencing early in the war and steadily continuing, soon led to rather difficult questions as to their disposal. Before the war, the army maintained a small department for the insane at the Royal Victoria Hospital at Netley. This department, which is known as "D Block" and constitutes practically an independent unit, accommodated only 125 men and three officers. For years the annual admission rate averaged 120. The only cases received were soldiers who had served at least ten years in the regular army or those with shorter service whose insanity seemed clearly to be due to such causes arising in line of duty as head injuries, tropical fevers, exhaustion, wounds, etc. As it was manifestly impossible to care for more cases at Netley, the insane soldiers who were first sent home from the expeditionary forces, as well as those from the home forces, were "certified" (*i. e.*, legally committed) and sent to the local "county lunatic asylums" as they are called, unless their relatives and friends took them off the hands of the government and disposed of them otherwise. The appearance of soldiers from the front in the district asylums, where they were burdened by the double stigma of lunacy and pauperism, aroused public disapproval that speedily made itself felt in Parliament.

About this time arrangements had been made to take over one county or borough asylum in each group of ten in the United Kingdom for use as a general military hospital for medical and surgical cases.* This made it possible to establish special war hospitals for mental cases. A department of the Middlesex County Asylum (re-named the Napsbury War Hospital), was opened for mental cases, and the District Asylum at Paisley, Scotland (re-named the Dykebar War Hospital), was turned over entirely for this purpose as was part of the Lord Derby War Hospital at Warrington which had been the Lancashire Asylum. Later the Belfast District Asylum in Ireland was take over as the Belfast War Hospital and still more recently the Perth District Asylum was taken over as the Murthley War Hospital, both

*Appendix II.

being used entirely for the insane. A pavilion at the Richmond District Asylum, Ireland, accommodates 100 and a small hospital in London (Letchmere House) cares for about 84 officers. An annex in connection with the Dykebar War Hospital has recently been opened so that there are now about 3,400 beds in strictly military hospitals available in Great Britain and Ireland for insane soldiers.

No attempt has been made to care for the insane in France, the policy of the War Office being to send all cases to the clearing hospital at Netley and then to the special institutions named as soon as possible. There are available in France only 125 beds, all for the temporary detention of mental cases.

Of the twenty-one asylums and similar institutions in Great Britain and Ireland which have been converted into military hospitals,* three are used wholly or in part for functional nervous diseases. In spite of the fact that the names of all these asylums were changed when they were taken over for their new use, a suspicion apparently exists among the public that soldiers with mental or nervous diseases are still being sent to district asylums as "pauper lunatics," the official designation of such patients. It is not easy for us in America to understand the importance of this aspect of the question for in most states our state hospitals enjoy a reputation which would no more stigmatize insane soldiers than it does their sisters or daughters when they require treatment obtainable only in these institutions. In England, however, insanity and pauperism have been closely linked and it is the latter which is very largely responsible for the stigma attached to these institutions. The government was obliged, therefore, early in 1915 to announce that it had adopted the policy of sending to the district asylums only the following groups of cases from the expeditionary forces:

1. Patients with general paralysis of the insane.
2. Patients with chronic epilepsy.
3. Patients with incurable mental diseases and those giving a history of insanity before enlistment.

There is power to apply the pension of the soldier toward his support in these cases and he is thereby prevented from coming "on the rates." The separation allowances are discontinued

*To July 1, 1917.

when the pension is commenced. All insane soldiers from the non-expeditionary forces are certified and sent to the district asylums unless it can be shown that the disease was caused or aggravated by military service.

The results of these arrangements are not wholly satisfactory. There is a strong tendency to adopt an entirely different attitude toward insane soldiers than the wonderfully generous one which the nation has adopted toward the wounded and those suffering from physical disease. In the latter, the government readily admits its responsibility and makes liberal provisions for treatment, pension and industrial re-education, while in the former every effort is made to place the burden of responsibility and of support upon the patient or his relatives by magnifying alleged constitutional tendencies and minimizing the effects of military service. It is quite apparent that the conditions of actual service have much to do with the development of mental disease. Even in the case of general paralysis of the insane it is by no means certain that a young soldier with a positive Wassermann test would have developed general paralysis had he not been exposed to the supreme ordeal of service at the front. This official attitude toward mental disease results in an average period of treatment far shorter than is required in even the most benign psychoses in civil life. It is evident that mental cases are insufficiently treated in military hospitals.

During 1916, the number of mental cases passing through the 3,400 beds available for their care in Great Britain and Ireland was about 6,000. The recovery rate in military cases is much higher than in the mental cases admitted to civil hospitals but the rapid movement of population results chiefly from the custom of "passing on" these cases. Insane soldiers of the non-expeditionary forces are sent almost invariably directly to district asylums from general hospitals without even going to "D Block" where an inquiry could be made by experts to estimate the part played by military service in the causation of mental illness. When relatives and friends are induced to take insane soldiers from the military hospitals the next step is usually admission to the district asylums. During the year ending May 31, 1917, 900 insane soldiers were admitted to the local asylums. A considerable proportion of the insane, even from the expeditionary forces,

sooner or later find their way into the institutions out of which Parliament was intent upon keeping them.

The disposition of mental cases is well illustrated by the following table showing what was done in the case of 5,473 patients admitted from September 1, 1914, to May 31, 1917, at "D Block," Netley—a clearing hospital for mental diseases.

DISPOSITION OF CASES ADMITTED TO "D BLOCK," NETLEY, FROM THE BEGINNING OF THE WAR TO DECEMBER 31, 1916

To institutions for the insane	
Lord Derby War Hospital, Warrington	1,424
Murthley War Hospital, Perth	210
Dykebar War Hospital, Paisley	611
Shorncliffe (Canadian Clearing Mental Hospital)	147
District Asylums	128
Dartford (for insane prisoners of war)	3
To war hospitals for functional nervous cases	
Moss Side Hospital, Maghull	509
Springfield War Hospital, London	680
To hospitals for organic nervous diseases and injuries	
Queens Square	4
Maida Vale (for pensioners)	2
To Royal Victoria Military Hospital, Netley (recoveries and nervous diseases)	1,007
To almshouses	2
To Canadian hospitals or returned to Canada	5
To Australian hospitals or returned to Australia	33
To other hospitals and institutions	204
Discharged to relatives and friends	258
Died	21
Furloughed	110
Returned to duty	53
Remaining in hospital	57
Total	5,473

Clinical Types of Mental Disease among Soldiers

Contrary to popular belief and to some medical reports published early in the war, no new clinical types of mental disease have been seen in soldiers. There are no "war psychoses." The clinical pictures familiar in civil life are seen, colored often by the experience at the front, but for the most part unchanged in their symptomatology, outcome and course. The distribution of the different psychoses has been strikingly different from that in civil life but this has been chiefly due to the different age periods represented in patients from the army. The absence of the organic mental diseases of the later decades of life—which play so

large a part in civil statistics—has resulted in abnormally high percentages for other psychoses. Although no statistics for the whole number of admissions in a single year are available, nearly a thousand admissions from expeditionary troops to the Dykebar War Hospital during 1916 have been tabulated by Major R. D. Hotchkis.*

This series of cases is large enough to make some of the findings significant. They are borne out by observations made by Capt David K. Henderson at the Lord Derby War Hospital at Warrington which received 2,042 mental cases during the year ending April 30, 1917.

Mental Deficiency. About eighteen per cent of the patients admitted to the military hospitals for mental diseases are mentally defective. Only such mental defectives as get into trouble or develop acute psychotic episodes of one sort or another gain admission to these hospitals. It is impossible, therefore, from the point of view of the hospitals for mental diseases, to draw any conclusions as to the relation of mental deficiency to military service. The low grade of many cases received in the special hospitals is very striking and shows an amazing indifference on the part of recruiting officers to this type of disability. It is said that the worst types got in during the first rush of recruits under the voluntary system and that, since then, more pains have been taken to exclude them. Of the 151 mental defectives admitted to the Dykebar War Hospital, 37 were sent there simply because they had been giving trouble to other hospitals where they had been treated for wounds or diseases. Most of these soldiers were defectives of the restless, criminalistic type, many of whom had been civil offenders before entering the army. It is believed that they represent but a small part of the cases of this type in the military service, the majority being dealt with from a disciplinary standpoint without regard to the existence of mental defect, thus following the precedent which, unfortunately, is so firmly established in civil life. The remaining 114 defectives sent to Dykebar had been able to earn their own livelihood before entering the army. They had no criminalistic traits but had proved quite valueless in actual fighting. Sometimes these men were actually dangerous to their

*Appendix I (reference No. 48).

comrades and were permitted to load their rifles only when an attack was made. The very specialized activities of modern fighting discloses such individuals who under former military conditions would not have come to light. It is said that in the Boer War many boys from the special classes of the Birmingham and London schools made good soldiers but apparently the military usefulness of the mentally defective has disappeared under the conditions of modern warfare—an exceedingly important point for the consideration of a nation engaged in raising a new army.

Among the defectives received in the military hospitals for mental cases are many in whom attention has been directed to their disability by episodes of confusion or excitement. The outlook is very favorable in such cases, the quiet routine of the hospital having a beneficial effect in a remarkably short period of time. Mental defectives develop war neuroses, in spite of statements to the contrary, but with striking infrequency. The generally high standard of intelligence among the patients in the "shell shock" hospitals is noticeable.

There is much difference of opinion as to whether or not men known to be mentally defective should be recruited for any military service. In favor of their acceptance it is said that they can be assigned to certain kinds of work at the bases for which they are particularly fitted and thereby release soldiers with more intelligence for duty at the front. When one remembers that not only the army but the whole nation is at war, it seems more advisable, even for military reasons, to leave defectives at work in an environment to which they have already become accustomed than to try the experiment of placing them even in a special kind of military service. Certainly the army now has no means of assigning its work with reference to the limitations of such a special group. Moreover, when the army knowingly accepts mentally defective recruits, it assumes a liability for their protection which it can hardly be expected to meet in all the exigencies of war. Much injustice is done in the army by punishing mental defectives for military offenses which would have been condoned had the real mental condition of the offenders been appreciated. There are sufficient grounds for excluding all mental defectives from the military forces except when the last

available man-power must be utilized. When this is the case it will doubtless be found that their most effective service will be rendered at the base, under the supervision of non-commissioned officers who have been especially trained in their management.

Syphilitic Psychoses. About two per cent of the mental cases received in these special hospitals have general paresis. There is convincing evidence that the stress of war accelerates the progress of this disease. As older men enter the army the proportion of paresis rises. In the navy, which has been largely augmented by the enlistment of older men in the Naval Reserve, general paresis has attained a rate quite unknown in time of peace. Examinations to determine the prevalence of syphilis in recruits are extremely important and the experience of the British Army and Navy shows that no person presenting the slightest suspicion of syphilis of the central nervous system should be enlisted or commissioned for any military duty. In view of the social distribution of this disease and the generally higher age of officers, paresis is to be borne in mind especially in the examination of candidates for officers' commissions.

Manic-depressive Insanity. Patients in this group supply about twenty per cent of all admissions to military hospitals for mental diseases. The great proportion of those with depressed phases is very striking. Delusions and hallucinations are almost invariably colored by military experiences.

Alcoholic Psychoses. Soldiers with delirium tremens are admitted to special hospitals for mental diseases if they are stationed near such institutions. This disorder is now confined almost entirely to patients on leave from the front. During the early days of the war it was seen most frequently among those who had just entered military service and found their supply of alcohol restricted. The delusional types of alcoholic psychoses are found in older men stationed at bases who have the opportunity to continue life-long habits of drinking to excess. Attempted suicides are very common among alcoholics seen in military service. Alcoholics should not be accepted for military service even if it is possible to prevent them from securing alcohol at the front. Furloughs furnish opportunities for drinking and the time and effort spent in training men are lost through attacks on such occasions.

Dementia Praecox. Patients with this disorder constitute four-

teen per cent of those admitted. The histories of these cases show that in most instances symptoms were manifested shortly after entering the military service. It is apparent that many of them had been psychotic before enlistment. There seems to be no special modification of symptoms on account of military service.

Epilepsy. Seven per cent of cases received at Dykebar War Hospital were suffering from epilepsy. With one exception all had had the disease before enlistment.

Constitutional Psychopathic States. A very large number of these cases are received in the special military hospitals for mental diseases. They probably represent but a small proportion of such soldiers in the army for the percentage is large in the various disciplinary groups. Unfortunately the nomenclature used in the British Army did not permit the use of any term applicable to these cases until February, 1916, when the War Office authorized the addition of "mental instability" to the list of mental diseases. Many cases are now being reported under this heading. The occasion for their admission is usually an acute psychotic episode or a medico-legal situation.

Outlook in Mental Cases

There are no statistics available to show the outcome in the mental diseases treated in military hospitals. Discharge is much more likely to be regulated by administrative considerations than by clinical ones. Acute conditions seem to recover very quickly. Few return to "first line duty." The statistics indicate a much larger proportion than is actually the case. The number of those who go back to the colors is made up for the most part of patients who have recovered from delirium tremens and those with war neuroses who have been incorrectly admitted to institutions for the insane. Infective-exhaustive psychoses are much more likely to be regarded as "shell shock" than as mental disorders. The hospitals for mental diseases fail, therefore, to get these very recoverable cases and the recovery rate in such institutions suffers correspondingly.

Summary

Sorely pressed to meet the tremendous medical problems of war, England first used her existing civil facilities for caring for mental diseases among soldiers. Public disapproval, based chiefly upon

a mistaken attitude toward the insane and toward the local institutions for their care, forced a different method of management. The military hospitals for the insane, created without exception by converting civil institutions for mental diseases, failed to do much more than provide places for receiving mental cases and giving temporary care. The clearing hospital is in size and personnel woefully inadequate to deal with the important issues which should be determined there and a solution to the problem presented by mental diseases among soldiers in England does not seem to be in sight.

For the United States, this experience carries important lessons. More important than all others is the result of careless recruiting. The problem of dealing with mental diseases in the army—difficult at best—has been made still more so by accepting large numbers of recruits, who had been in institutions for the insane or were of demonstrably psychopathic make-up. The next most important lesson is that of preparing, in advance of an urgent need, a comprehensive plan for establishing special military hospitals and using existing civil facilities for treating mental disease in a manner that will serve the army effectively and at the same time safeguard the interests of the soldiers, of the government and of the community.

II. WAR NEUROSES ("SHELL SHOCK")

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ALTHOUGH an excessive incidence of mental diseases has been noted in all recent wars, it is only in the present one that functional nervous diseases have constituted a major medico-military problem. As every nation and race engaged is suffering severely from these disorders, it is apparent that new conditions of warfare are chiefly responsible for their prevalence. None of these new conditions is more terrible than the sustained shell fire with high explosives which has characterized most of the fighting. It is not surprising, therefore, that the term "shell shock" should have come into general use to designate this group of disorders. The vivid, terse name quickly became popular and now it is applied to practically any nervous symptoms in soldiers exposed to shell fire that cannot be explained by some obvious physical injury. It is used so very loosely that it is applied not only to all functional nervous diseases but to well-known forms of mental disease, even general paresis. Such a situation is most unsatisfactory and at the present time an attempt is being made to improve the nomenclature of the nervous disorders of war.

Discussion of clinical features of the war neuroses is not within the scope of this report, which deals with treatment and military management.* It is impossible, however, even to define the problem with which we are dealing without a few general observations on the nature of the disorders which are grouped under the name "shell shock."

The subject can be clarified a little by dividing the different conditions so designated into some clinical and etiological groups. First should be considered cases in which the patients have been actually exposed to the effects of high explosives.

1. Not infrequently, just how often it is impossible to say, exploding shells or mines cause death without external signs of injury. Apparently death in these cases is sometimes due to damage to the central nervous system.

*These extraordinarily interesting medical problems of the war are dealt with in a rapidly expanding volume of special literature. The July number of MENTAL HYGIENE (Vol. I, No. 3) contains a résumé of this literature. One hundred and forty-one references in English are given in Appendix I of this report. Attention is directed particularly to the contributions of Major Frederick M. Mott (71 and 72), Prof. G. Elliot Smith (108), Capt. Charles S. Meyers (74), Capt. Clarence B. Farrar (32), Capt. M. D. Eder (28) and to the extensive report by Dr. John T. MacCurdy in the *Psychiatric Bulletin* (N. Y.) for July, 1917. (The numbers refer to the references in Appendix I.)

2. In another group of cases severe neurological symptoms follow burial or concussion by explosions in characteristic syndromes suggesting the operation of mechanical factors. The studies of Major Mott*indicate that concussion, in aerial compression and the rapid decompression following it, "gassing" from the drift gases (carbon monoxide and oxides of nitrogen) generated by the explosion and other purely mechanical effects of shell explosion may result in transitory or permanent neurological symptoms of a type unfamiliar in the neuroses.

There can be no question of the propriety of supplying the term "shell shock" to these two groups of cases if a specific term is required.

3. Another group of cases, among those exposed to shell fire, includes patients in whom, while there may or may not be damage to the central nervous system, the symptoms are those of neuroses familiar in civil practice even though colored in a very distinctive way by the precipitating cause. In this group of cases, in which there is possibility but no proof of damage to the central nervous system, the symptoms present which might be attributable to such damage are quite overshadowed by those characteristic of the neuroses.

It is about these cases that much controversy exists. Mott includes them in his group of "injuries of the central nervous system without visible injury," holding that a physical or a chemical change at present unknown to us must underlie such striking disabilities. Others give less weight to the factor of physical damage and yet recognize its existence and reconcile the wide range of neurotic symptoms with the very minute amount of damage which may exist by terming these cases "traumatic neuroses." Others again feel that psychogenetic factors determine not only the continuing neurosis but even the initial unconsciousness and special sense disturbances.

4. There is a group of cases in which even the slightest damage to the central nervous system from the direct effects of explosions is exceedingly improbable, the patients being exposed only to conditions to which hundreds of their comrades who develop no symptoms are exposed. In these cases the symptoms, course and outcome correspond with those of the neuroses in civil practice.

If all neuroses among soldiers were included in these groups the use of the term "shell shock" might be defended. But many hundreds of soldiers who have not been exposed to battle conditions at all develop symptoms almost identical with those in men whose nervous disorders are attributed to shell fire. The non-expeditionary forces supply a considerable proportion of these cases.

*Appendix I, reference 71.

To state that, in the cases included in the last two groups of cases in which shell explosions play a part, the mechanism is that of a neurosis by no means excludes the operation of physical causes. Very little is known, however, regarding the physiological basis of the disorders in this group or even in those in the first two groups in which the issues are apparently predominantly organic. It may be that in the latter two groups endocrinitic disturbances are important. Minute injuries of the cord may exist and factors such as exposure, exhaustion, vascular disequilibrium and disorders of metabolism may enter into their causation. Treatment directed along the lines suggested by such an etiology has thus far proved quite ineffective, however, and there is only the most slender basis of experimental work to show that such factors are important. This is a fertile field for research. It is earnestly hoped by all those consulted in England that the United States Army, coming freshly into contact with this problem, will organize a working party of psychiatrists, neurologists, neuro-pathologists and internists and try to clear some of these issues.

It is the opinion of most psychiatrists and neurologists who have been studying and treating "shell shock" in the British Army that the fourth group is the largest and most important and that, whatever the unknown physiological basis, psychological factors are too obvious and too important in these cases to be ignored. In support of this view there is much evidence, some of which it may be worth while to give.

1. The striking excess of war neuroses among officers. The ratio of officers to men at the front is approximately 1:30. Among the wounded it is 1:24.* *Among the patients admitted to the special hospitals for war neuroses in England during the year ending April 30, 1917, it was 1:6.*

2. The rarity of war neuroses among prisoners exposed to mechanical shock.†

3. The rarity of war neuroses among the wounded exposed to mechanical shock.

4. The clinical resemblance which the war neuroses bear to the neuroses of civil life in which the element of mechanical shock is lacking while the psychological situations are somewhat alike.

5. The fact that severe war injuries to the brain and spinal cord are not accompanied by symptoms similar to those in "shell shock," in which injuries of less degree are assumed.

*Analysis of 381,983 casualties between August 4, 1914, and August 21, 1915, reported in a statement in Parliament, and 901,534 casualties between July, 1916, and July, 1917.

†References given by Capt. C. B. Farrar (Appendix I, reference 32).

6. The success attending therapeutic measures employed with reference to the psychological situations discovered in individual cases.

These suggestive facts require some elaboration. The high prevalence of "shell shock" among officers corresponds with the distribution of the neuroses, with reference to education and social grouping, in civil life. Soldiers who are wounded and those who are taken prisoners in battle are exposed to wind concussion and rapid decompression and other mechanical factors in the same degree as their comrades who suffer from neuroses. One must conclude from the fact that they escape that being wounded or being captured provides them with something which the neurosis provides for others. The symptoms exhibited usually bear a more direct relation to the existing psychological situation than they could possibly bear to the localization of a neurological injury. Thus a soldier who bayonets an enemy in the face develops an hysterical tic of his own facial muscles; abdominal contractures occur in men who have bayonetted enemies in the abdomen; hysterical blindness follows particularly horrible sights; hysterical deafness appears in those who find the cries of the wounded unbearable and men detailed to burial parties develop anosmia.

The psychological basis of the war neuroses (like that of the neuroses in civil life) is an elaboration, with endless variations, of one central theme: escape from an intolerable situation in real life to one made tolerable by the neurosis. The conditions which may make intolerable the situation in which a soldier finds himself hardly need stating. Not only fear, which exists at some time in nearly all soldiers and in many is constantly present, but horror, revulsion against the ghastly duties which must be sometimes performed, intense longing for home, particularly in married men, emotional situations resulting from the interplay of personal conflicts and military conditions, all play their part in making an escape of some sort mandatory. Death provides a means which cannot be sought consciously. Flight or desertion is rendered impossible by ideals of duty, patriotism, and honor, by the reactions acquired by training or imposed by discipline and by herd reactions. Malingering is a military crime and is not at the disposal of those governed by higher ethical conceptions. Nevertheless, the conflict between a simple and direct expression in flight of the instinct of self-preservation and such factors de-

mands some sort of compromise. Wounds solve the problem most happily for many men and the mild exhilaration so often seen among the wounded has a sound psychological basis. Others with a sufficient adaptability find a means of adjustment. The neurosis provides a means of escape so convenient that the real source of wonder is not that it should play such an important part in military life but that so many men should find a satisfactory adjustment without its intervention. The constitutionally neurotic, having most readily at their disposal the mechanism of functional nervous diseases, employ it most frequently. They constitute, therefore, a large proportion of all cases but a very striking fact in the present war is the number of men of apparently normal mental make-up who develop war neuroses in the face of the unprecedentedly terrible conditions to which they are exposed.

One of the chief objections to the use of the term "shell shock" is the implication it conveys of a cause acting instantly. The train of causes which leads to the neurosis that an explosion ushers in is often long and complicated. Apparently in many military cases mental conflicts in the personal life of the soldier that are not directly connected with military situations influence the onset of the neuroses. Thus men who have been doing very well in adapting themselves to war develop "shell shock" immediately after receiving word that their wives have gone away with other men during their absence.

Approached from the psychological viewpoint, the symptoms in the war neuroses lose much of their weird and inexplicable character. Most of them can be summed up in the statement that the soldier loses a function that either is necessary to continued military service or prevents his successful adaptation to war. The symptoms are found in widely separated fields. Disturbances of psychic functions include delirium, confusion, amnesia, hallucinations, terrifying battle dreams, anxiety states. The disturbances of involuntary functions include functional heart disorders, low blood pressure, vomiting and diarrhea, enuresis, retention or polyuria, dyspnoea, sweating. Disturbances of voluntary museular functions include paralyses, tics, tremors, gait disturbances, contractures and convulsive movements. Special senses may be affected producing pains and anesthesias, mutism, deafness,

hyperacusis, blindness and disorders of speech. It is highly significant that, in this unprecedented prevalence of functional nervous diseases among soldiers, no symptoms unfamiliar to those who see the neuroses in civil life present themselves.

In all of these the soldier is afflicted with more or less incapacity without obvious explanation. This is a condition involving grave dangers. His condition is degrading and is often rendered more so by the punishment or ridicule to which he is subjected. For this reason, immediately after the onset of the symptoms of the neurosis, the patient passes through a very critical period. Improper management may add to the primary neurological disability—which is largely beyond our power of preventing—secondary effects which go even further in producing nervous invalidism. Long-continued treatment in general hospitals, confusion of the neurosis present with the organic nervous diseases, and unintelligent management, all tend to produce the chronic "shell shock" cases which are so familiar in the special hospitals for these disorders. Symptoms which were at one time quite easily removable become fixed and refractory or new ones are constantly produced. The mental attitude—the patient's morale as a soldier and his attitude toward his disorder—reaches a very low level, will is seriously impaired and a chronic invalid replaces a temporarily incapacitated soldier. These are matters in the realm of clinical psychiatry and psycho-pathology and are outside the scope of this report. Space is given to them here only because of their very important bearing upon treatment and military management.

Prevalence

The medical statistics of the war are as yet untabulated. Even if the records contained the information desired it would be very difficult to state the prevalence of the neuroses on account of the defective nomenclature employed. It is doubtful if there is another group of diseases in which more confusion in terms exists. Nervous or mental symptoms coming to attention after the soldier has been exposed to severe shell fire, are almost certain to be diagnosed as "shell shock," and yet when such patients are received in England, well-defined cases of general paresis, epilepsy or dementia praecox are often found among them. This source of confusion tends to swell the number of cases reported under the

term "shell shock," but there are many other sources of error which tend to diminish the apparent prevalence of the war neuroses. Chief among these is reporting the neuroses under the name of the most prominent somatic symptom. The largest group of cases in which this is done is made up of patients diagnosed officially as having disordered action of the heart ("D. A. H."). Where the only symptoms are cardio-vascular ones of neurotic origin, a legitimate question of medical nomenclature exists, but one sees in the wards or hospitals given over to functional heart disorders, patients with hysterical paralyses, tics, tremors, mutism, anxiety states and other severe neurotic symptoms. Another source of error is the practice, made mandatory by a recent order, of returning these cases (when occurring in soldiers engaged in actual fighting) as "injuries received in action."

With a view to discovering the prevalence of the neuroses and insanity, Sir John Collie, President of the Special Pension Board on Neurasthenics, made an analysis of 170,000 discharge certificates for disability, interpreting the diagnoses given in the light of his very large experience. He found that the neuroses constituted 20 per cent of these discharges.

The number of cases treated in the special hospitals in England gives some idea of the prevalence of these disorders, but the fact that the number of troops in the expeditionary and the non-expeditionary forces is confidential, makes it impossible to give the rates for the two great divisions of the British Army. During the year ending April 30, 1916, approximately 1,300 officers and 10,000 men were admitted to the special hospitals for "shell shock" and neurasthenics in Great Britain. The 1,800 beds in these special hospitals constitute less than half the total provisions in Great Britain for such cases, as neurological departments exist in the large territorial general hospitals and in the Royal Victoria Hospital in Edinburgh. Moreover, a constantly increasing number of these cases are being treated in France. The recoveries in the hospitals there diminish, to an unknown degree, the number of cases received in the hospitals in Great Britain. It is the belief of those who have made an effort to ascertain the prevalence of the war neuroses, that the rate among the expeditionary forces is not less than ten per thousand annually, and among the home forces not less than three per thousand.

Treatment

General arrangements. When soldiers suffering from functional nervous disorders began to arrive in England from the expeditionary forces in September, 1914, no special civil or military hospitals existed for their reception. In the case of mental diseases it was an easy task to convert "D Block" at the Royal Victoria Hospital into a clearing hospital and to utilize civil institutions for the insane for continued care, but in England, as in the United States, there are no public civil hospitals that are engaged exclusively in the work of treating the neuroses. The special civil hospitals for organic nervous diseases were soon filled with patients suffering from severe neurological injuries and were able to do very little on behalf of those with functional nervous disorders.

For a short time it was necessary to care for all such cases in general military hospitals for medical and surgical conditions. The rapid increase in the number of such cases during October and November, 1914, led to the detail of a special medical officer to ascertain their special needs and to prepare a plan for meeting them. The recommendations of this officer that special institutions be provided for functional nervous diseases was approved and when, in December, 1914, the Moss Side State Institution at Maghull was turned over to the War Office, the first military hospital for functional nervous diseases was available. This institution was particularly suitable for this purpose. It had been completed but not opened for the care of mental defectives of the delinquent type and consisted of detached villas accommodating 347 patients.* The number of these patients was so great, however, that general hospitals were still called upon to deal with them. The establishment of neurological departments in these hospitals partly met the situation until additional special hospitals could be provided. The second such hospital was secured by using a detached portion of Middlesex County Asylum in London. This hospital, accommodating 278 additional patients, was renamed the Springfield War Hospital.* The foresight of Sir Alfred Keogh and his advisors thus enabled England to make provision for these cases in special military hospitals at an early period in the war.

*Appendix III.

With more than one hospital available, it was possible to make different provisions for different classes of patients suffering from war neuroses. A clearing hospital was therefore established early in 1915 at the Fourth London Territorial General Hospital where the best disposition could be determined. The Maudsley Hospital, a psychopathic hospital for the County of London,* was nearing completion at this time and, as it adjoined the Kings College Hospital which formed the larger part of the Fourth London Hospital, it was utilized as a nucleus for this clearing station. The Maudsley Hospital accommodates 175 men and 20 officers; the neurological section—"the Maudsley extension" —accommodates 450 men and 80 officers. Thus by the spring of 1915, England was provided with a clearing hospital for war neuroses and two special institutions for their continued care. Notwithstanding this provision, by far the greater number of cases were cared for in general hospitals in England and no special provision for continued treatment existed in France. The disadvantages of attempting to treat functional nervous disorders in general hospitals were very apparent and so neurological sections were established in territorial general hospitals in England, Scotland and Wales and in the Royal Victoria Hospital at Netley. Other special hospitals have been provided since, a directory and descriptions of those visited being given in Appendix III.†

When the submarines commenced to sink hospital ships indiscriminately last year a great deal of the medical work previously done in England was undertaken in France and so special provisions for functional nervous cases were made at Havre, Ireport, Boulogne, Rouen and Étaples. Formerly little more than establishing the diagnosis was done in France. It is likely that the work of caring for these cases will be turned over more and more to the special hospitals in France as the results of treatment there have been, on the whole, so much more successful than in home territory.

A recent extension of treatment is that of providing care still

*Appendix III.

†An interesting account of the arrangements for the care of soldiers with war neuroses is given in a special article by Lt. Col. William Aldren Turner. (Appendix I, reference 125.)

nearer the front. The striking results obtained in Casualty Clearing Stations and similar advanced posts in the French Sanitary Service (*postes de chirurgie d'urgence*) are confirmed by many observers.

Capt. William Brown, a psychiatrist, who has recently had the opportunity of working in a Casualty Clearing Station of the British Expeditionary Forces reports that of 200 nervous and mental cases which passed through his hands in December, 1916, 34 per cent were evacuated to the base after seven days' treatment and 66 per cent returned to duty on the firing line after the same average period of treatment. Four of these cases reappeared at the same Casualty Clearing Station.

Capt. Louis Casamajor of the U. S. Army, neurologist to Base Hospital No. 1, British Expeditionary Force, says in a recent letter: "It is a mistake to send these cases to England. We need an intermediate step between the general hospital and the convalescent camp. Of course they never should get into general hospitals at all but should be sent from Casualty Clearing Stations direct to neuro-psychiatric hospitals. . . . I hope our army will have a psychiatrist in each Casualty Clearing Station to weed these cases out and send them to their proper places and not have them knock around from one general hospital to another, being pampered into hard-set neuroses."

Lèri, working in the neuro-psychiatric center of the second French Army, reports that 91 per cent of the cases received from July to October, 1916, were returned to the fighting line. Marie reports that the neuroses are less frequently met with in Paris now that they are treated immediately upon their appearance in the Army neuro-psychiatric centers.*

Major Frederick W. Mott says: "I regard this matter of preventing the fixation of a functional paralysis as of supreme importance both in respect to the welfare of the individual and from the economic point of view of the state."

Roussy and Boisseau,† describing the work of an army neuro-psychiatric center say: "The results obtained after six months show that a neuro-psychiatric center can render incontestable services to an army both from a medical and a military point of view. For functional nervous cases it avoids sojourns (more dangerous the more they are prolonged) in the hospitals at the rear where these patients are generally lost. It allows of the treatment of other nervous or mental cases that are quickly curable and the direct evacuation to the special centers in the interior of those more seriously affected."

Captain C. B. Farrar‡ says: "Moreover it seems to be a fact that treatment is more satisfactorily carried out and cures more speedily accomplished in hospitals close to the front and where the spirit of army discipline is most felt. It is conceded that the worst possible place to treat a case of war neurosis is in his home town, where in so far especially as the more striking objective symptoms are concerned, the sympathetic wonderment and commiseration of friends create

**Revue neurologique* (Nov.–Dec., 1916).

†*Paris médicale*, 1:14–20 (Jan. 1, 1916).

‡*American journal of insanity*, 73: 711–712 (April, 1917).

a positive demand which the ideogenic factor of the patient's illness continues faithfully to supply. In hospitals close behind the lines there is still the atmosphere of the front and a mental tone which comes from mass-suggestion of men striving shoulder to shoulder. This mental tone is eminently supportive and therapeutic, but with the transfer of patients to interior hospitals far behind the lines it naturally gives way. The circumstances which produce it are no longer operative and the nervous relaxation and reaction which ensue are often conspicuously and painfully evident. Out of danger, far from the front, perhaps among hero-worshipping friends, the invalid is unavoidably conscious of himself more as an individual and less as a link in the battle line. All the conditions are favorable for the fixation and reinforcement of the neurosis as an ideogenic process. Too often he is found to be the victim not only of his malady, but of his friends as well, and in more senses than one."

General principles. Methods of treatment employed in different special hospitals are described in Appendix III. With so much regarding the war neuroses the subject of controversy, it is not surprising that different methods of treatment have come into existence. The Royal Army Medical Corps has seen fit to leave these matters largely to the specialists in charge of the different hospitals and so the treatment in each reflects, to a certain degree, the conception of the nature of war neuroses held by the medical officer in charge. Certain general principles regarding treatment may be stated.

The experience of the British "shell shock" hospitals emphasizes the fact that the treatment of the war neuroses is essentially a problem in psychological medicine. While patients with severe symptoms of long duration recover in the hands of physicians who see but dimly the mechanism of their disease and are unaware of the means by which recovery actually takes place, no credit belongs to the physician in such cases and but little to the type of environment provided. In the great majority of instances the completeness, promptness and durability of recovery depend upon the insight shown by the medical officers under whose charge the soldiers come and their resourcefulness and skill in applying treatment.

The first step in treatment is a careful study of the individual case. There are no specific formulae for the cure of mutism, paralyses or tremors or other manifestations of war neuroses. These are symptoms and the patient must be treated as well as his symptoms. As in all other psychiatric work, efforts must first be made to gain an understanding of the personality—the

fabric of the individual in whom the neurosis has developed. His resources and limitations in mental adaptation will determine in a large measure, the specific line of management. The military situation is most striking but the problem which life in general presents to the individual and the type of adaptation which he has found serviceable in other emergencies are of as much importance as the specific causes for failure in the existing situation. The disorder must be looked at as a whole. The incident which seems to have precipitated the neurosis—whether shell explosion, burial or disciplinary crisis—must receive close attention but not to the exclusion of other factors less dramatic but often more potent in the production of the neurosis. It has often been said that some of the symptoms of hysteria are the work of the physician and are created—not disclosed—by neurological examinations. This is apparently true, but the question whether analgesia can exist until the pin prick demonstrates it is somewhat like the question whether sound can exist without an ear to receive it. It is not only true, but a fact of great practical importance, that a skilful, searching, psychological examination often constitutes the first step in actual treatment.

In the analysis of the situation, as well as in the subsequent management of the patient, the medical officer's attitude is of much importance. He must be immune to surprise or chagrin. Although understanding sympathy is nearly as useful as misdirected sympathy is harmful, he must always remain in firm control.

The resources at the disposal of the physician in treating the war neuroses are varied. The patient must be re-educated in will, thought, feeling and function. Persuasion, a powerful resource, may be employed, directly backed by knowledge on the part of the patient as well as the physician of the mechanism of the particular disorder present. Indirectly, it must pervade the atmosphere of the special ward or hospital for "shell shock." Hypnotism is valuable as an adjunct to persuasion and as a means of convincing the patient that no organic disease or injury is responsible for his loss of function. Thus in mutism the patient speaks under hypnosis or through hypnotic suggestion and thereafter must admit the integrity of his organs of speech. The striking results of hypnotism in the removal of symptoms

are somewhat offset by the fact that the most suggestible who yield to it most readily are particularly likely to be the constitutionally neurotic. A mental mechanism similar to that which produced the disorder is being used in such cases to bring about a cure.

Recovery within the sound of artillery or at least "somewhere in France" is more prompt and durable than that which takes place in England. For severe cases and those which through mismanagement have developed the unfortunate secondary symptoms of "shell shock" and in whom long-continued treatment is necessary, a rural place is best.

Re-education by physical means is a valuable adjunct to treatment in recent cases but particularly in chronic cases who have been mismanaged and in those who are recovering from long continued paralyses, tics, mutism and gait disorders. While drills and physical exercises have their specific uses, occupation is the best means. Non-productive occupations should be avoided.

Occupations are conveniently classified as:

1. Bed.
2. Indoor.
3. Outdoor.

1. Basket-making and net-making are good bed occupations for cases with extensive paralyses, as are making surgical dressings and various minor finishing operations (sandpapering, polishing, etc.) on products of the shops. All occupations, and especially those which are carried on by patients seriously incapacitated, should be regarded as only steps in a process of progressive education. Every effort must be made to prevent skill acquired in them from being considered as a substitute for full functional activity. Herein is an important difference between the "re-education" of neurotic and orthopedic cases. In the latter the purpose is often to make the remaining sound limb take on the functions of one which is missing or permanently disabled. *The function held in abeyance through neurotic symptoms must never be looked upon as lost.* It can and must be restored and if another function is developed as its surrogate the day of full recovery is thereby postponed. Bed occupations, therefore, must always be regarded as the first steps in a series which is to culminate in full activity. Progress through achievements constantly more difficult is the keynote of re-education in the war neuroses.

2. A wide variety of indoor occupations should be provided including at the minimum carpentry, wood carving, metal work and cement work. Printing, bookbinding, cigarette making, electric wiring and other work should be added as opportunities permit.

3. Farming, gardening and building operations are desirable outdoor occupations. Where possible, wood sawing and chopping are very desirable as is the care of stock not requiring much land (squabs, guinea pigs, rabbits, game, frogs).

Before even the simplest occupation can be engaged in it is sometimes necessary to re-educate paraplegics and ataxics in walking and co-ordination. Just as soon as possible, exercises should be replaced by productive occupations which will accomplish the same results more quickly and more satisfactorily. The same is true of gymnastic exercises which in the early steps of treatment constitute a valuable resource but which should be replaced by specially devised, useful tasks. Swimming has a unique place in the treatment of gait disturbances, paralyses and tics. One of the first pieces of construction undertaken by the outdoor patients at a reconstruction center should be that of building a large concrete swimming tank.

Hydrotherapy and electrotherapy have a distinct value when they are applied with absolute sincerity and full realization on the part of patient and medical officer of the rôle which they actually play in the treatment of functional nervous diseases.

The experience in English hospitals has demonstrated the great danger of aimless lounging, too many entertainments and relaxing recreations such as frequent motor rides, etc. It must be remembered that "shell shock" cases suffer from a disorder of will as well as function and it is impossible to effect a cure if attention is directed to one at the expense of the other. As Dr. H. Crichton Miller has put it, " 'shell shock' produces a condition which is essentially childish and infantile in its nature. Rest in bed and simple encouragement is not enough to educate a child. Progressive daily achievement is the only way whereby manhood and self-respect can be regained."

Outcome

It was impossible for me to discover the end-results of treatment. The following table shows the disposal of 731 discharges

from the Red Cross Military Hospital at Maghull during the year ending June 30, 1917.

	Number	*Per cent*
To military duty	153	20.9
To civil life	476	65.1
To other hospitals	88	12.0
To civil institutions for the insane	7	1.0
Died	3	0.4
Deserted	4	0.6
	731	100.0

It is the opinion of the commanding officer of this hospital that few men (with the severe or chronic types of neuroses there received) can be sent back to military duty at the front. More could be returned to duty at the base but for the fact that after having been in a "shell shock hospital," they are regarded as being poor material and little effort is taken to train them for their new duties. Under such conditions the men become discouraged and soon show signs of relapse. Those discharged to civil life have done satisfactorily—as might be expected when one bears in mind the genesis of the neuroses in war.

At the Granville Canadian Special Hospital at Ramsgate, upwards of 60 per cent of the patients admitted were returned to the front. The experience of this hospital is of special value to us because the cases treated are those which seem likely to recover within six months. All others and those who do not improve quickly at Ramsgate are sent to Canada. It would be wise for the United States Army to adopt a similar policy.

In the special wards established in France the recoveries are still more numerous.*

It is evident that the outcome in the war neuroses is good from a medical point of view and poor from a military point of view. It is the opinion of all those consulted that, with the end of the war, most cases, even the most severe, will speedily recover, those who do not being the constitutionally neurotic and patients who have been so badly managed that very unfavorable habit-reactions have developed. This cheering fact brings little consolation, however, to those who are chiefly concerned with the wastage of

*Pp. 36-37.

fighting men. The lesson to be learned from the British results seems clear—that treatment by medical officers with special training in psychiatry should be made available just as near the front as military exigency will permit and that patients who cannot be reached at this point should be treated in special hospitals in France until it is apparent that they cannot be returned to the firing lines. *As soon as this fact is established military needs and humanitarian ends coincide.* Patients should then be sent home as soon as possible. The military commander may have the satisfaction of knowing that food need not be brought across to feed a soldier who can render no useful military service, and the medical officer may feel that his patient will have what he most needs for his recovery—home and safety and an environment in which he can readjust.

Looking at the matter from a military point of view alone, one might ask whether it is not desirable to send home all "shell shock" cases—in whom so much effort results in so few recoveries. Such a decision would be as unfortunate from a military as from a humanitarian standpoint. Its immediate effect would be to increase enormously the prevalence of the war neuroses. In the unending conflict between duty, honor and discipline, on the one hand, and homesickness, horror, and the urgings of the instinct of self-preservation on the other, the neurosis—as a way out—is already accessible enough in most men without calling attention to it and enhancing its value by the adoption of such an administrative policy.

Medico-legal Relations

The sudden appearance of marked incapacity, without signs of injury, in a group of men to whom invalidism means a sudden transition from extreme danger and hardship to safety and comfort, quite naturally gives rise to the suspicion of malingering. The general knowledge among troops of the more common symptoms of "shell shock" and of the fact that thousands of their comrades suffering from it have been discharged from the army suggests its simulation to men who are planning an easy exit from military service by feigning disease. It is therefore of much military importance that medical officers be not deceived by such frauds. On the other hand, especially before the clinical characters and remarkable prevalence of war neuroses among soldiers

had become familiar facts, not a few soldiers suffering from these disorders were executed by firing squads as malingerers. Instances are also known where hysterics have committed suicide after having been falsely accused of malingering. Mistakes of this kind are especially likely to occur when the patients have not been actually exposed to shell fire on account of the idea so firmly fixed in the minds of most line officers and some medical men that the war neuroses are always due to mechanical shock.

The diagnosis between neuroses and malingering may sometimes be extremely difficult but usually it is easy when the examiner is familiar with both conditions. The difficulties arise from the fact that in both, a disease or a symptom is simulated. As Bonnal says, "The hysteric is a malingerer who does not lie." The cardinal point of difference is that the *malingerer simulates a disease or a symptom which he has not in order to deceive others.* He does this consciously to attain, through fraud, a specific selfish end—usually safety in a hospital or discharge from the military service. He lies and *knows* that he lies. *The hysteric deceives himself by a mechanism of which he is unaware and which is beyond his power consciously to control.* He is usually not aware of the precise purpose which his illness serves. This is shown by the fact that, in many cases, all that is necessary for recovery is to demonstrate clearly to the patient the mechanism by which this disability occurred and the unworthy end to which, unconsciously, it was directed.

There are a number of distinctive points of difference between hysteria and malingering, two of which it may be interesting to mention.

The malingerer, conscious of his fraudulent intent and fearful of its detection, dreads examinations. The hysteric invites examinations, as is well known to physicians in civil practice. When he has the opportunity he makes the rounds of clinics and physicians, especially delighting in examinations by noted specialists.

The hysteric, in addition to the symptoms of which he complains, often presents objective symptoms of which he is unaware. The malingerer, unless of low intelligence, confines his complaints to the disease or symptom which he has decided to simulate.

Malingering may follow or prolong a neurosis. This is not

infrequently the case when mutism is succeeded by aphonia. In such cases the clinical picture presents changes very apparent to the experienced psychiatrist but it must be remembered that malingerers (like criminals in civil life) are often very neuropathic individuals.

The gravity of malingering as a military offense in an army in the field justifies the recommendation that no case in which the possibility of a neurosis or psychosis exists shall be finally dealt with until the subject is examined by a neurologist or psychiatrist. If neuro-psychiatric wards are provided in base hospitals in France as well as in the United States, such an examination will be feasible in practically all cases without causing undue delay. The knowledge that malingerers are subjected to expert examinations always tends to discourage soldiers from this practice.

III. RECOMMENDATIONS FOR THE UNITED STATES ARMY

III. RECOMMENDATIONS FOR THE UNITED STATES ARMY

THE following recommendations for the treatment of mental diseases and war neuroses ("shell shock") in the United States troops are based chiefly upon the experience of the British Army in dealing with these disorders, as outlined in the foregoing report. The advice of British medical officers engaged in this special work has aided greatly in formulating the plans presented. At the same time conditions imposed by the necessity of conducting our military operations three thousand miles away from home territory have been borne in mind.

It seems desirable to consider separately in these recommendations, expeditionary and non-expeditionary forces. It is necessary to deal separately with mental and nervous diseases in the United States but not in France. While facilities existing at home can be utilized for the treatment of mental diseases it is necessary to create new ones for the treatment of the war neuroses. In France, where all facilities for treatment must be created by the medical department, the distinction between psychoses and neuroses need not be drawn so closely. Consequently, simpler and more effective methods of administrative management can be devised.

The importance of providing, in advance of their urgent need, adequate facilities for the treatment and management of nervous and mental disorders can hardly be overstated. The European countries at war had made practically no such preparations and they fell into difficulties from which they are now only commencing to extricate themselves. We can profit by their experience and, if we choose, have at our disposal, before we begin to sustain these types of casualties in very large numbers, a personnel of specially-trained medical officers, nurses and civilian assistants and an efficient mechanism for treating mental and nervous disorders in France, evacuating them to home territory and continuing their treatment, when necessary, in the United States.

Although it might be considered more appropriately under the heading of prevention than under that of treatment, the most important recommendation to be made is that of rigidly excluding insane, feebleminded, psychopathic and neuropathic individuals

from the forces which are to be sent to France and exposed to the terrific stress of modern war. Not only the medical officers but the line officers interviewed in England emphasized, over and over again, the importance of not accepting mentally unstable recruits for military service at the front. If the period of training at the concentration camps is used for observation and examination, it is within our power to reduce very materially the difficult problem of caring for mental and nervous cases in France, increase the military efficiency of the expeditionary forces and save the country millions of dollars in pensions. Sir William Osler, who has had a large experience in the selection of recruits for the British Army and has seen the disastrous results of carelessness in this respect, feels so strongly on the subject that he has recently made his views known in a letter to the *Journal of the American Medical Association** in which he mentions neuropathic make-up as one of the three great causes for the invariable rejection of recruits. In personal conversation he gave numerous illustrations of the burden which the acceptance of neurotic recruits had unnecessarily thrown upon an army struggling to surmount the difficult medical problems inseparable from the war.

It is most convenient to summarize the recommendations as follows and then to discuss each one somewhat in detail:

SUMMARY OF RECOMMENDATIONS FOR THE CARE AND TREATMENT OF MENTAL DISEASES AND WAR NEUROSES ("SHELL SHOCK")

IN THE EXPEDITIONARY FORCES

OVERSEAS

1. *Base Section of Lines of Communication*
   (a) A Special Base Hospital of 500 beds for neuro-psychiatric cases, located at the base upon which each army (of 500,000–600,000) rests. These special base hospitals to be used for cases likely to recover and return to active duty within six months. Other cases to be cared for while waiting to be evacuated to the United States.
   (b) One or more Special Convalescent Camps in connection with (and conducted as part of) each Special Base Hospital.
2. *Advanced Section of Lines of Communication*
   (a) Special Neuro-Psychiatric Wards of 30 beds in charge of three psychiatrists and neurologists for each base hospital having an active service. These wards to be used for observation (including medico-legal cases) and for emergency treatment of mental and nervous cases.
   (b) Detail of a psychiatrist or neurologist attached to the neuro-psychiatric wards of base hospitals, to evacuation hospitals or stations further advanced as opportunities permit.

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UNITED STATES

1. *Mental Diseases (insane)*
   (a) One or more Clearing Hospitals for reception, emergency treatment, classification and disposition of mental cases among enlisted men invalided home.
   (b) Clearing Wards (in connection with general hospitals for officers or private institutions for mental diseases) for reception, emergency treatment, classification and disposition of mental cases among officers invalided home.
   (c) Legislation permitting the Surgeon-General to make contracts with public and private hospitals maintaining satisfactory standards of treatment for the continued care of officers and men suffering from mental diseases until recommended for retirement or discharge (with or without pension) by a special board.
   (d) Appointment of a special board of three medical officers to visit all institutions in which insane officers and men are cared for under such contracts to see that adequate treatment is being given and to retire or discharge (with or without pension) those not likely to recover.
2. *War Neuroses ("shell shock")*
   (a) Re-construction centers (the number and capacity to be determined by the need) for the treatment and re-education of such cases of war neuroses as are invalided home. Injuries to the brain, cord and peripheral nerves to be treated elsewhere.
   (b) Special convalescent camps where recovered cases can go and not be subject to the harmful influences for those cases which exist in camps for ordinary medical and surgical cases.
   (c) Employment of the Special Board of medical officers, recommended under "1 (d)," to visit all re-education centers and convalescent camps in which war neuroses are treated to see that adequate treatment is being given and to retire or discharge (with or without pension) those not likely to recover.

EXPEDITIONARY FORCES

1. OVERSEAS

The plan herein suggested for dealing with mental and functional nervous diseases in the expeditionary forces overseas presupposes that all sick and wounded soldiers who are not likely to be returned for duty in the fighting line within six months will be evacuated to home territory. The same considerations which led to the adoption of this policy by the Canadian Army are equally valid in the case of American troops. If large numbers of the sick and wounded who are not likely to return to active duty have to be cared for in France during long periods of disability, the amount of food and other supplies which must be sent overseas for them and for those who care for them will diminish the tonnage available for the transportation of munitions required for successful military operations; the great auxiliary hospital facilities available in the United States cannot be utilized and,

in the case of the severe neuroses, fewer recoveries will take place. If submarine activities seriously interfere with the return of disabled soldiers to the United States and it is necessary to provide continued care, chronic cases should be evacuated to special hospitals established in France for this purpose. It is very desirable to maintain an active service in base hospitals that receive cases from the front. This is especially true in the case of the war neuroses.

(a) *Base Section of Lines of Communication.* The base upon which each army rests should be provided with a special base hospital of five hundred beds for neuro-psychiatric cases. Three years' experience in treating these cases in general hospitals in England and France amply demonstrates the need for such an institution. Few more hopeful cases exist in the medical services of the countries at war than those suffering from the war neuroses grouped under the term "shell shock" *when treated in special hospitals by physicians and nurses familiar with the nature of functional nervous diseases and with their management.* On the other hand, the general military hospitals and convalescent camps presented no more pathetic picture than the mismanaged nervous and mental cases which crowded their wards before such special hospitals were established. Exposed to misdirected harshness or to equally misdirected sympathy, dealt with at one time as malingerers and at another as sufferers from incurable organic nervous disease, "passed on" from one hospital to another and finally discharged with pensions which cannot subsequently be diminished, their treatment has not been a wholly creditable chapter in military medicine. As one writer has said, "they enter the hospitals as 'shell shock' cases and come out as nervous wrecks." To their initial neurological disability (of a distinctly recoverable nature) are added such secondary effects as unfavorable habit-reactions, stereotypy and fixation of symptoms, the self-pity of the confirmed hysteric, the morbid timidity and anxiety of the neurasthenic and the despair of the hypochondriac. In such hospitals and convalescent homes inactivity and aimless lounging weaken will, and the attitude of permanent invalidism quickly replaces that of recovery. The provision of special facilities for the treatment of "shell shock" cases is imperative from the point of view of military efficiency as well as from that of

common humanity, for more than half these cases can be returned to duty if they receive active treatment in special hospitals from an early period in their disease.

British experience indicates that about one hundred of the beds in each such special base hospital would be occupied by mental cases and the rest by those suffering from war neuroses. It is not necessary to make this division arbitrarily in advance, however, as both classes of cases can be cared for in the type of hospital to be proposed and re-distribution of patients can be made from time to time as circumstances require. It should be the object of these special base hospitals to provide treatment for all cases likely to recover and be returned to active duty within six months. Practically all mental cases, even those who recover during this period, as well as functional nervous cases presenting an unfavorable outlook or which are unimproved by special treatment, should be evacuated to the United States as rapidly as transportation conditions will permit.

Each such hospital should be located with reference to its accessibility to other hospitals along the lines of communication of the army which it serves. This will necessitate its being on the main railway line down which disabled soldiers are evacuated from the front. It should also be within convenient reach of, although not necessarily at, the port of embarkation. If it is possible to secure a site in southern France where outdoor work can be continued during the winter many important advantages will be gained. Gardening and other outdoor occupations are so valuable that the amount of ground adjoining each base hospital, or contiguous to it, should be not less than one acre for every six patients of one third its population. Thus, at least thirty acres are required for a hospital with 500 beds.

The type of general hospital adopted by the American Army for cantonment camps could be used, with certain interior changes, but it would be more advantageous to secure a hotel or school and remodel it to perform the special functions of a hospital of this character. The living arrangements in these special hospitals are simpler than in general hospitals for medical and surgical cases. About five per cent of the bed-capacity will have to be in single rooms. This percentage will be somewhat greater in the psychiatric division and smaller in the neurological division. Less

than three per cent of the population will be bed-patients. A sufficient number of rooms in both the neurological and psychiatrical divisions should be set aside for officers—the higher proportion of officers among patients with neuroses being taken into consideration in planning this department.

It is necessary to allow liberally for examining rooms, massage, hydrotherapy and electrotherapy and to provide one large room which can be used for an amusement hall. When the patients and staff have been suitably housed attention should be directed to the highly important features of shops, industrial equipment, gymnasium and gardens. If no suitable buildings close to the hospital can be secured, perfectly adequate facilities can be provided in cheaply constructed wooden huts with concrete floors. A gymnasium can be erected more cheaply than an existing building can be adapted for this purpose unless a large storehouse, barn or factory is available.

Hydrotherapeutic equipment should include continuous baths, Scotch douche, needle baths and a swimming pool. The latter is exceptionally valuable in the treatment of functional paralyses and disturbances of gait which disappear while patients are swimming, thus often opening the way for rapid recovery by persuasion.

Electrical apparatus is necessary for diagnostic purposes and also for general and local treatment.

Second in importance only to the general psychological control of the situation in functional nervous diseases* is the restoration of the lost or impaired functions by re-education. None of the methods available for re-education are so valuable in the war neuroses as those in which a useful occupation is employed as the means for training. Re-education should commence as soon as the patient is received. Thought, will, feeling and function have all to be restored and work toward all these ends should be undertaken simultaneously. Non-productive occupations are not only useless but deleterious. The principle of "learning by doing" should guide all re-educative work. Continual "resting," long periods spent alone, general softening of the environment and occupations undertaken simply because the mood of the patient suggests them are positively harmful, as shown by the poor re-

*Pp. 37–38.

sults obtained in those general hospitals and convalescent homes in which such measures are employed.

The industrial equipment needed is relatively simple and inexpensive. It is very desirable to begin with a few absolutely necessary things and to add those made by the patients themselves. When this is done every piece of apparatus is invested, in the eyes of the patients, with the spirit of achievement through persistent effort—the very keynote of treatment. The fact that it has been made by patients recovering from neuroses will help hundreds of subsequent patients through the force of hopeful suggestion. The following list gives the equipment for the shops which is necessary at the beginning:

Smiths' shop
Forges, tools, etc., for ten men

Fitting shop
One screw-cutting lathe, one sensitive drill, one polishing machine, one electric motor 1½ h.p., swages and tools for eight men

Leather blocking room
Sewing machine, eyeletting machine, tank, galvanized iron and tools

Tailors' shop
Three sewing machines, tools for ten men

Carpenters' shop
Selected tools for fifteen men, bench screws and special tools not for general use, wood-turner's lathe

Machine shop
Electric motor 8½ h.p., with shafting, brackets, etc.

Cement shop
Metal moulds, tools for twelve men

Printing shop
Press and accessories

General
Drilling machine, grindstone, screw-cutting lathe, fret-saw workers' machine and patterns, circular-saw, bench

Practically all gymnasium apparatus can be made in the shops after the hospital is opened.

Each special base hospital should be able to evacuate patients who, although not quite able to return to active duty, no longer require intensive treatment. For this purpose one or more convalescent camps within convenient distance by motor truck from the main institution should be established. Each of these convalescent camps should not exceed 100 in capacity. It will require only one medical officer, one sergeant, three female nurses,

an instructor and three or four hospital corps men, as the patients will be able to care for themselves and in a short time return to duty.

One camp may have to be established for the care of another type of cases. It is conceivable that submarine activity will interfere so seriously with the evacuation of chronic and non-recoverable cases to the United States that the special hospital will be overcrowded. Overcrowding will instantly interfere with the success of the work and this will simply mean that men who otherwise might recover and return to military duty at the front will fail to do so. Such a calamity can be averted by transferring chronic and non-recoverable cases to a camp organized upon quite simple lines under direct control of the main hospital and near enough to utilize its therapeutic resources. The beds which such patients would otherwise occupy in the special base hospital can be made available for the use of fresh, recoverable cases. Such developments might better be made naturally as circumstances require than provided for by any formal arrangements made in advance.

Each base hospital should have the personnel enumerated in the following table:

PERSONNEL FOR SPECIAL BASE HOSPITAL FOR NEURO-PSYCHIATRIC CASES

COMMISSIONED OFFICERS		
Major	M.C.	Commanding Officer
Captain	M.C.	Adjutant, Surgeon of the Command, Recruiting Officer
Captain	Q.C.	Quartermaster
Major	M.R.C.	Director
Major	M.R.C.	Chief Neurological Division
Major	M.R.C.	Chief Psychiatrical Division
Major	M.R.C.	Chief Occupational Division
Captain	M.R.C.	Pathologist
Captain	M.R.C.	In charge of Convalescent Camp
Captain	M.R.C.	In charge of Electrotherapy and Hydrotherapy
Captain	M.R.C.	Ward Physician (in charge of Transportation of Patients)
Captain	M.R.C.	Ward Physician
Captain	M.R.C.	Ward Physician
1st Licutenant	M.R.C.	Ward Physician
1st Licutenant	M.R.C.	Ward Physician
1st Lieutenant	M.R.C.	Ward Physician
1st Lieutenant	M.R.C.	Ward Physician
1st Lieutenant	M.R.C.	Ward Physician
1st Lieutenant	San.C.	Psychologist
1st Lieutenant	San.C.	Registrar

NON-COMMISSIONED OFFICERS

Sergeant, 1st Cl.	H.C.	General Supervision
Sergeant, 1st Cl.	Q.C.	Quartermaster Sergeant
Sergeant, 1st Cl.	H.C.	Office
Sergeant, 1st Cl.	H.C.	In charge of Detachment and Detachment Accounts
Sergeant, 1st Cl.	H.C.	In charge of Mess and Kitchen
Sergeant, 1st Cl.	H.C.	General Supervision, Convalescent Camp
Sergeant, 1st Cl.	H.C.	In charge of Shops
Sergeant, 1st Cl.	H.C.	In charge of Garden and Grounds
Sergeant	H.C.	Hydrotherapy Rooms
Sergeant	H.C.	Electrotherapy Rooms
Sergeant	H.C.	Massage Rooms
Sergeant	H.C.	Shops
Sergeant	H.C.	Gymnasium
Sergeant	H.C.	Mess and Kitchen
Sergeant	H.C.	Storerooms
Sergeant	H.C.	Office
Sergeant	H.C.	Office
Sergeant	H.C.	Outside Police
Sergeant	H.C.	Wards
Sergeant	H.C.	Wards
Sergeant	H.C.	Wards
Sergeant	H.C.	Wards
Sergeant	H.C.	Wards
Sergeant	H.C.	Transportation of Patients

FEMALE NURSES (N.C.)

Chief Nurse	1	46
Assistant to Chief Nurse	1	
Dietist	1	
Ward Nurses	43	

ENLISTED MEN (H.C.)

14 Acting Cooks

115 Privates, 1st Cl. and Privates

Distributed as follows:

Ward Attendants		
Neurological Division	22	52
Psychiatrical Division	26	
Convalescent Camp	4	
Shops		10
Electrotherapy rooms		4
Hydrotherapy rooms		4
Massage rooms		6
Laboratory		2
Kitchens and mess		14
Office		5
Storerooms		6
Orderlies		4
Outside Police		4
Supernumeraries		4
		115

CIVILIAN EMPLOYEES		
Instructors		
Outdoor occupations	1	2
Indoor occupations	1	
Assistant Instructors		
Carpentry and wood carving	1	8
Cement work	1	
Metal work	1	
Leather work	1	
Gardening	1	
Printing	1	
Gymnasium	2	
Stenographers		4
Photographer		1
Laboratory technician		1
		16

RECAPITULATION	
Commissioned officers	20
Non-commissioned officers	24
Female nurses	46
Enlisted men	129
Civilian employees	16
	235

The commissioned medical officers should all be men with excellent training in neurology and psychiatry. The neurologists should have a psychiatrical outlook and the psychiatrists should be familiar with neurological technique. Of importance almost equal to the professional qualifications of these officers is their character and tact, and no man who is unable to adjust his personal problems should be selected for this work. There is no place in such hospital for a "queer," disgruntled or irritable individual except as a patient. Men who are strong, forceful, patient, tactful and sympathetic are required. It is better to permit a medical officer not having these qualifications to remain at home than to assign him to one of these hospitals and allow him to interfere with treatment by his failure to establish and maintain proper contact with his patients. The resources to be employed include psychological analysis, persuasion, sympathy, discipline, hypnotism, ridicule, encouragement and severity. All are dangerous or useless in the hands of the inexperienced, as the records of "shell shock" cases treated in general hospitals testify. In the hands of men capable of forming a correct estimate

of the make-up of each patient and of employing these resources with reference to the therapeutic problem presented by each case, they are powerful aids.

The female nurses should have had experience in the treatment of mental and nervous diseases. Character and personality are as important in nurses as in medical officers. A large proportion of college women will be found advantageous.

The enlisted men who perform the duties of ward attendants and assistants in the shops, gardens and gymnasium should include a considerable number of those who have had experience in dealing with mental and nervous diseases. The civilian employees who act as instructors should all have had practical experience in the use of occupations in the treatment of nervous and mental diseases. The instructor for bed occupations should be a woman and she should train the female nurses to assist her in this kind of work.

No work is more exacting than that which will fall to the physicians and chief lay employees in such hospital. Success in treatment depends chiefly upon each person's establishing and maintaining a sincere belief in the work to which he or she is assigned. No hysterical case must be regarded as hopeless. The maintenance of a correct attitude and constant co-operation between physicians, nurses, instructors and men in the face of the tremendous demands which neurotic patients make upon the patience and resourcefulness of those treating them soon bring weariness and loss of interest if opportunities for recreation do not exist. Therefore, it should be the duty of the director to see that the morale and good spirits of all are kept up. His recommendations as to the transfer to other military duties of medical officers, nurses, instructors or men who prove unsuited for this work should be acted upon whenever possible by the chief surgeon under whom the hospital serves. A man or a woman may prove unadapted to this work and yet be a valuable member of the staff of another kind of hospital. This subject is mentioned so particularly because of its great importance. The type of personnel will determine the success of this hospital and hence its usefulness to the army in a measure which is unknown in other military hospitals. It does not greatly matter whether the operating surgeon understands the personality of the soldier upon whom he is oper-

ating or not. Whether or not the physician treating a case of "shell shock" understands the personality of his patient spells success or failure.

The first special base hospital established for neuro-psychiatric cases should have so highly efficient a personnel that it will be able to contribute one third of its medical officers and trained workers to the next similar base hospital to be established, filling their places from those on its reserve list. This should be repeated a second time if necessary and thus a uniform standard of excellence and the same general approach to problems of treatment assured in each special base hospital organized in France.

(b) *Advanced Section of Lines of Communication.* The French and the British experience shows the great desirability of instituting treatment of "shell shock" cases as early as possible. So little has been done as yet in this direction that we do not know much about the onset of these cases and just what happens during the first few days. Such information as has been contributed, however, by the few neurologists and psychiatrists who have had an opportunity of working in casualty clearing stations or positions even nearer the front indicates that much can be done in dealing with these cases if they can be treated within a few hours after the onset of severe nervous symptoms. There are data to show that even by the time these cases are received at base hospitals additions have been made to the initial neurological disability and a coloring of invalidism given which frequently influences the prospects of recovery. It is desirable, therefore, to provide neuro-psychiatric wards for selected base hospitals in the advanced section of the lines of communication. Other base hospitals can send cases to those which possess such wards. The plan of providing such sections, in charge of neurologists and psychiatrists, for divisional base hospitals in the cantonment camps in the United States has been adopted by the Surgeon-General. If it is found practicable to make similar provisions in France, these units can accompany the divisions to which they are attached when they join the expeditionary forces in the spring of 1918. In the meantime it is essential that each base hospital should have on its staff a neurologist or a psychiatrist. Provision for the care of mental and nervous cases nearer the front, along the lines of communication, can best be developed, after the first special base

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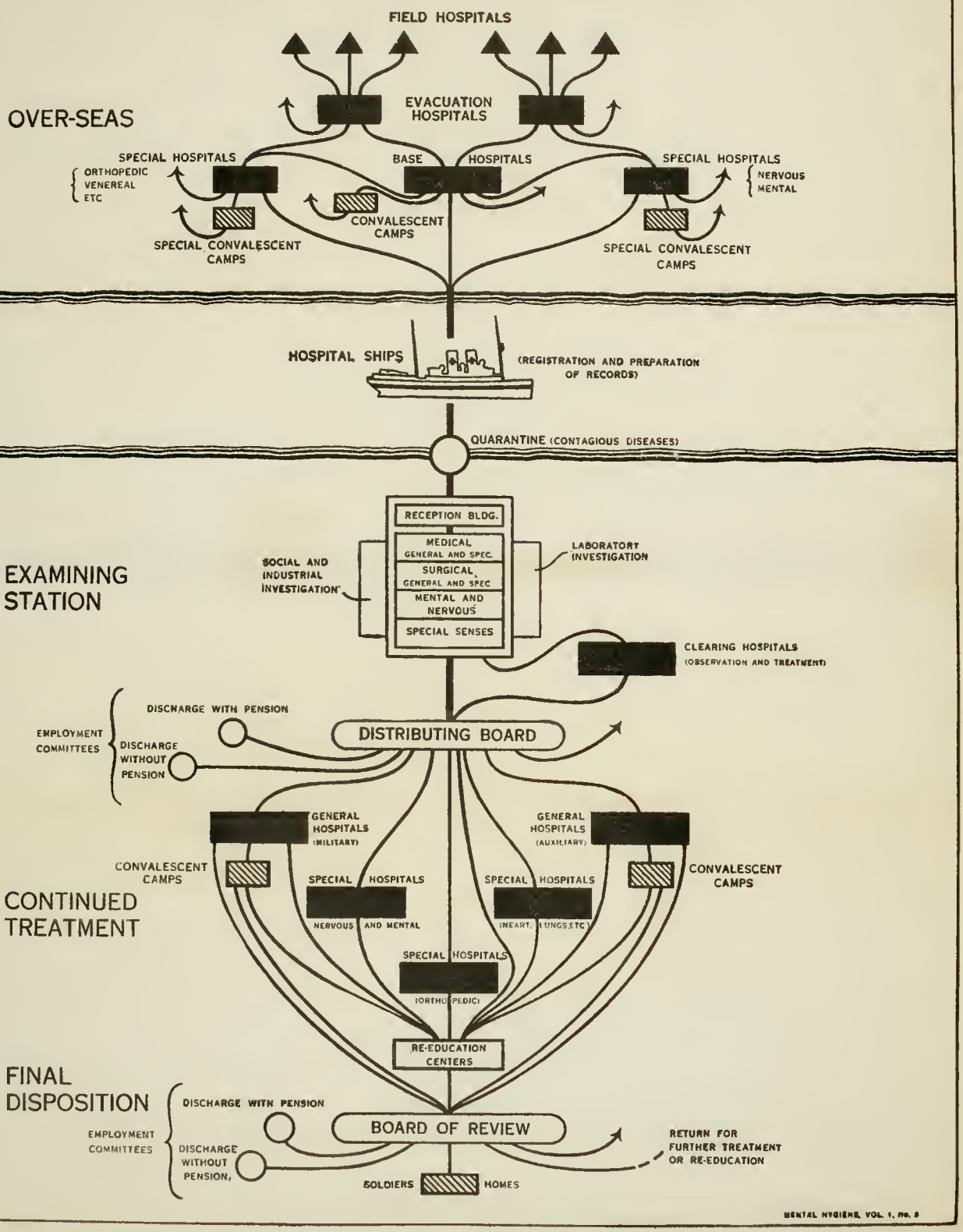
CAREER OF DISABLED RETURNED SOLDIERS

(SPEARHEADS INDICATE RETURN TO THE COLORS)



hospital for neuro-psychiatric cases has been established, by detaching from its staff individual officers as actual circumstances require.

It is undesirable to formulate plans for providing this kind of care still nearer the fighting line until a more careful study has been made of the results obtained by the English and French medical services in this undertaking.

The foregoing recommendations are illustrated graphically in the upper part of the accompanying chart from Major Pearce Bailey's recent paper.*

II. IN THE UNITED STATES

(a) *Mental Diseases (Insanity).* If the policy is adopted of caring in France for mental cases likely to recover and evacuating all others to the United States at once or at the expiration of six months' treatment, we may expect to receive at the port of arrival in the United States not less than 250 insane soldiers per month from an expeditionary force of 1,000,000. We may assume that a plan will be adopted for the reception and the distribution of soldiers invalided from France such as proposed by Major Bailey.

Well-organized facilities for dealing with mental disease exist in the United States which can be utilized by the government without the necessity of creating expensive new agencies. It is obvious that the first facts to be determined in the case of soldiers reaching the United States while still suffering from mental disorders or who have been invalided home after recovery from acute attacks, are:

1. The cause of the disorder, with special reference to military service.
2. The probable outcome.
3. The probable duration.
4. The special needs in treatment.

It is quite impossible to ascertain any of these facts by casual examination and so it will be necessary to provide "clearing hospitals" for non-commissioned officers and enlisted men where patients may be received and studied upon their arrival with the view of determining these questions. With an average annual admission rate of 3,000 patients, a clearing hospital of three

*Mental Hygiene, Vol. I, No. 3 (July, 1917).

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hundred beds would permit an average period of treatment of thirty-six days. This would seem to be sufficient as the Boston Psychopathic Hospital, during an average period of treatment of eighteen days, not only determines similar questions but provides continued care for a considerable number of recoverable cases. Such clearing hospitals should be established near the port of arrival and should be essentially military hospitals, with directors who are not only well trained in their medical duties but are familiar with the requirements of military life and with the institutional provisions in the United States that can be utilized for continued treatment.

With such active service as a clearing hospital will have, the number of medical officers should be not less than ten and there should be an adequate clerical force to care for the important administrative matters which would require attention. The organization of civil psychopathic hospitals in this country affords data for determining the proper size of the ward and domestic services.

After a period of observation and treatment the director of such hospital should be prepared to furnish the Special Distributing Board with information and definite recommendations as to the further disposal of each case.

Some patients will be found at the clearing hospitals to have recovered. Although, as a matter of military policy, these patients will not be available for duty again in France, they are still of military value to the government. Such soldiers should be returned to duty in the United States by the Special Distributing Board in a category which would prevent their being exposed again in the fighting line but which would indicate precisely the work for which they are suited. We can conceive of many such soldiers who are likely to break down again under the stress of actual fighting but who are quite likely to remain in good health if they are not so exposed. These men will have had valuable military experience and could render efficient service as instructors in training camps or in the performance of other military duties in the United States. Others who have recovered will give evidence of possessing such an unstable or inferior mental make-up that no further military life, even in the United States, is desirable. In such cases, recommendations should be made by the directors

of the clearing hospitals to the Special Distributing Board to discharge them to their homes, with or without pensions as the circumstances demand.

There will be found others who have not been benefited at all by treatment in France and who suffer from mental disorders with an extremely unfavorable outlook for recovery. When this conclusion seems justified, the directors of the clearing hospitals should recommend these cases for transfer to a suitable public or private institution in the states from which they enlisted and their discharge from the army, with or without pension as the circumstances demand.

Another group of cases will be made up of those suffering from psychoses which are probably recoverable. It is equally to the advantage of the army, the community and the patient that such soldiers be given continued treatment. Facilities for the care of mental diseases vary so greatly in many of the states that neither the army nor the patients can receive any assurance that proper treatment will be afforded if such soldiers are discharged to the public institution nearest their homes. In such cases the important question of discharge, with or without pension, should be deferred until every facility has been given, during a reasonable period of time, for recovery to take place. It is recommended, therefore, that these cases be retained in the army until their recovery or until the end of the war and ordered for treatment to state hospitals with which the Secretary of War has made contracts. A government hospital for the insane would be the most suitable for carrying out such treatment but the present excellent institution in Washington has reached the size of 3,135 beds and can care for few additional military cases. It is highly desirable that the government should now establish a military hospital for mental diseases for the army and navy and permit the government hospital to devote all its resources to its civil duties. It would be impossible, however, to have such institution ready within two years. If it were possible to construct such new government hospital in a shorter time, it would still be necessary to provide for treatment by contract, for this institution would probably have to care for not more than 1,500 military cases during peace. A much larger number is to be expected during the war.

It is wiser to care for insane soldiers during the war under contract at ten or twelve first-class hospitals with fully adequate facilities for treatment than to distribute them solely with reference to the location of their homes. This will involve a certain hardship through making it difficult for such men to be visited by their relatives and friends but it is possible to distribute the contract hospitals over the country in such way that there would be few cases more than a day's journey from their homes. The primary object is to insure recovery in all recoverable cases. This should outweigh all other considerations.

The legislation permitting the Secretary of War to make such contracts should state clearly that they shall be made only with institutions possessing facilities for treatment laid down by the Surgeon-General. A list of such facilities, prepared by The National Committee for Mental Hygiene for another purpose, is appended* as it may form a useful guide in this connection. The contract hospitals should be required to devote an entire building of approved construction to military cases or to erect temporary structures meeting the necessary requirements for this purpose.

In order that the army may be able to discharge mental cases cared for under contract promptly upon their recovery or upon ascertaining that recovery is unlikely, it is desirable that a special board of three medical officers should be established to visit the institutions constantly and act as a Board of Survey. If a medical officer in each contract hospital were appointed in the Medical Reserve Corps and assigned to the duty of caring for army patients he could serve as a member of such board when convened at his hospital and make it possible for the three general members to cover much more ground.

Clearing wards for officers should be established to serve the special purposes indicated in the description of the clearing hospitals for enlisted men. Such wards should provide for the reception, classification, and treatment in cases likely to be of short duration. They might be established in connection with general hospitals at the port of arrival or in connection with very efficient private institutions for the insane in which full military control of this department could be secured.

It is equally important to provide for the continued treatment

*Appendix IV.

of offieers and not to leave this question, in which the army has so great an interest, to choice or geographical convenience. Arrangement similar to those for the continued care of enlisted men in public contract hospitals could easily be made with the best, endowed private institutions for the insane.

(b) *War Neuroses* (*"Shell Shock"*). It is not necessary here to outline the organization of reconstruetion centers for the treatment of war neuroses in the United States. The general principles in treatment described in the foregoing report and in the plan recommended for France should be a guide in the development of those centers.

It should be remembered that if the policy recommended of evacuating to the United States only the patients who fail to recover in six months in France is adopted, some very intractable cases will be received. For the most part these will be patients with a constitutional neuropathic make-up—the type most frequently seen in civil praetiee. Many of these cases will prove amenable to long-continued treatment and much can be expeeted from the mental effect of return to the United States. It is very important not to fall into the mistake made in England of discharging these severe cases with a pension because of the discouraging results of treatment. To do so will swell the pension list enormously, as can be seen by the fact that 15 per cent of all discharges from the British Army are unreeovered cases of mental diseases and war neuroses. Quite aside from financial considerations, however, is the injustice of turning adrift thousands of young men who developed their nervous disability through military service and who can find in their home towns none of the facilities required for their eure. It is recommended, therefore, that *no soldiers suffering from functional nervous diseases be discharged from the army until at least a year's special treatment has been given.* Furloughs can be given when visits home or treatment in eivil hospitals will be beneficial but the government should neither evade the responsibility nor surrender the right to direct the treatment of these cases. A serious social and economie problem has been created in England already through the establishment in its communities of a group of chronic nervous invalids who have been prematurely discharged from the only hospitals existing for the effieient treatment of their illness. So

serious is this problem that a special sanitarium "The Home of Recovery"*—the first of several to be provided—has been established in London and subsidized by the War Office for the treatment of such cases among pensioners.

It is highly important not to permit convalescent cases of this kind to be cared for in the ordinary type of convalescent camp or home. The surroundings so suitable for convalescents from wounds or other diseases are very harmful to neurotic cases. Here much that has been accomplished in special hospitals by patient, skilful work is undone. Therefore, special convalescent camps similar to those recommended for the expeditionary forces in France should be established within convenient reach of the reconstruction centers.

The special board recommended for the final disposition of mental cases should deal with cases of functional nervous diseases.

NON-EXPEDITIONARY FORCES

Facilities for the treatment of neuro-psychiatric cases at the camps in the United States have been approved by the Surgeon-General and are now being provided. These will undoubtedly prove sufficient for dealing temporarily with mental cases developing in the non-expeditionary forces. Their final disposition should be made by means of the same mechanism recommended for expeditionary patients who are invalided home, except that the functions of the clearing hospital for mental diseases can be performed by the neuro-psychiatric wards of divisional hospitals and that of the special board by the Board of Survey composed of the neurologists and psychiatrists stationed at the camps.

Neuroses are very common among soldiers who have never been exposed to shell fire and will undoubtedly be seen frequently among non-expeditionary troops in this country. In England nearly 30 per cent of all men from the home forces admitted to one general hospital were suffering from various neuroses.† Most of these were men of very neurotic make-up. Many had had previous nervous breakdowns. Fear, even in the comparatively harmless camp exercises, was a common cause of neurotic symp-

*Appendix III.

†Burton-Fanning, F. W. Neurasthenia in soldiers of the home forces. *Lancet* (London). 1: 907–11 (June 16, 1917).

toms. Heart symptoms were exceedingly common. The same experience in our own training camps can be confidently predicted.

The responsibility of the government in such cases is obviously different from that in soldiers returning from duty abroad. In the neuro-pyschiatric wards of divisional hospitals the important and difficult question of diagnosis can be well determined. Most such cases should be discharged from the service. Some can be treated at the reconstruction centers for, unfortunately, there are scarcely any provisions in the United States for the treatment of the neuroses except in the case of the rich. It is freely predicted in England that the wide prevalence of the neuroses among soldiers will direct attention to the fact that this kind of illness has been almost wholly ignored while great advances have been made in the treatment of all others. In civil life one still hears of detecting hysteria, as if it were a crime and, although the wounded burglar is carefully and humanely treated in the modern city hospital, the hysteric is usually driven away from its doors. Today the enormous number of these cases among some of Europe's best fighting men is leading to a revision of the medical and popular attitude toward functional nervous diseases.

APPENDICES

APPENDIX I

REFERENCES IN ENGLISH TO MENTAL DISEASES AND WAR NEUROSES ("SHELL SHOCK") AND THEIR TREATMENT AND MANAGEMENT

This bibliography includes only books, articles and other references published since the beginning of the war. Abstracts of some of the more important articles in English, French, German, Italian and Russian periodicals were published in MENTAL HYGIENE, Vol. I, No. 3, July, 1917. A complete review of the literature on the psychoses and neuroses in war will be published as a monograph by the War Work Committee of The National Committee for Mental Hygiene in March, 1918.

APPENDIX I

REFERENCES IN ENGLISH TO MENTAL DISEASES AND WAR NEUROSES ("SHELL SHOCK") AND THEIR TREATMENT AND MANAGEMENT

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APPENDIX II

THE USE OF INSTITUTIONS FOR THE INSANE AS MILITARY HOSPITALS

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THE USE OF INSTITUTIONS FOR THE INSANE AS MILITARY HOSPITALS

IN January 1915, when the pressure upon the Royal Army Medical Corps to provide additional hospital beds for wounded soldiers became acute, the Board of Control was asked by the War Office to co-operate in an attempt to secure 50,000 beds. All other government departments having institutions under their control were also asked to assist. The Board of Control formulated a plan whereby 92 county and borough asylums were to be divided into ten groups and one institution in each group vacated of its patients and turned over to the War Office as a military hospital. It was planned to provide in this way 15,000 beds or almost one third of the total number required. The methods by which this plan was put into execution were so thorough and expeditious that an account of how it was done may be useful to those who may be confronted with a similar task in this country if the fortunes of war should demand it.*

As soon as the plans of the Board of Control had been formulated a circular (Circular A—Use of Asylums as Military Hospitals) was sent out to all chairmen and clerks of Visiting Committees and all Medical Superintendents. A copy of this circular, a circular giving the observations of the War Office on the plan (B–Use of Asylums as Military Hospitals), and the letter which accompanied them follows:

A. USE OF ASYLUMS AS MILITARY HOSPITALS

Scheme, prepared by the Board of Control, for the general administration of vacated asylums, and the details of reimbursement which the War Office undertakes to make to receiving and vacated asylums.

I. *Charges arising from the maintenance and treatment of sick and wounded soldiers in Asylum Buildings, which the Army Council undertakes to meet.*

* Very interesting articles by Lt. Col. D. G. Thomson (*Journal of Mental Science*, 62: 109–35, January 1916) and Major R. D. Hotchkis (*Journal of Mental Science*, 63: 245–49, April 1917) give accounts of the measures taken in England and Wales to convert county asylums into war hospitals and particularly of the conversion of the institutions of which they were superintendents, namely, the Norfolk County Asylum and the Renfrew District Asylum, respectively. In the discussion of Col. Thomson's paper (*loc. cit.*) other superintendents of institutions which had been converted into war hospitals gave their experiences.

1. Vacated Asylums

(a) Charges in connection with buildings and equipment.

i. Necessary adaptations of the buildings for hospital purposes.

ii. Maintenance and repairs of premises.

iii. Reinstatement of premises at end of occupation by Army Council.

iv. Additional equipment found necessary: *e. g.*, hospital requirements, extra beds, etc.

Note:—All extra equipment purchased at the expense of the War Office which remains in stock at the conclusion of the war, is to be regarded as the property of the War Office, but may, if the asylum authorities so desire, be taken over by them wholly or in part at a valuation.

(b) Charges in connection with the maintenance of staff and of soldier patients.

i. Salaries and wages, including fees to surgeons and other experts, and remuneration of other persons called in to supplement ordinary staff.

ii. Victualling on scales laid down by Army Council.

iii. Uniform for staff and clothing for patients.

iv. Furniture and bedding. (Renewals and repairs.)

v. Medicines, surgical appliances and instruments.

vi. Fuel, lighting, washing and other necessaries.

vii. Rates, taxes and insurance.

viii. Incidental expenses, including travelling, burials, etc.

2. Receiving Asylums

Charges in connection with the maintenance of lunatics.

i. Additional weekly cost of maintenance, if any.

ii. Equipment and stores required for additional numbers and extra cost of maintenance and depreciation.

iii. Any necessary slight structural alterations necessitated by increased numbers, extra wear and tear, and reinstatement of premises.

3. Cost of all Necessary Travelling and Conveyance of Lunatics

II. *General Arrangements.*

1. The War Office will be solely responsible for the medical care and treatment of the soldiers and the management of the hospital.

2. The asylums will be handed over as going concerns with the whole of their staff, medical, engineering, stores, farms, etc., and such part of the nursing and attendant staff not needed to accompany the patients to the receiving asylums. The portion of the nursing staff retained at the asylum should be that portion best suited to take up or assist in the care of the sick and wounded.

3. The War Office will appoint the additional medical and nursing staff required for the hospital. The visiting committee and the medical superintendent will generally, from their local knowledge, be able to suggest suitable persons for employment in addition to those already in War Office service.

4. Subject to the directions of the committee, the medical superintendent is the head and director of the asylum administration, and in most instances, no doubt, he will be appointed by the War Office to be the officer in charge of the hospital. If so appointed he will continue to exercise the general control over the institution and its staff and working, for which his experience specially qualifies him. The other medical officers of the asylum will ordinarily be qualified and willing to become part of the medical staff of the hospital, and to share the duties with the additional professional staff sent by the War Office.

5. The whole of the asylum staff is in the employment of the visiting committee by whom they are appointed and by whom they can be dismissed. They are in established pension-

able service, and it is necessary that their asylum service should be unbroken, except for misconduct. If in any instance it is expedient that the head of the hospital should be an officer other than the medical superintendent, it is desirable that he should delegate the lay administration of the institution to the committee which, from experience and local knowledge, is obviously the authority best qualified to carry it on. The medical chief will thus be relieved from many laborious administrative tasks. The delegation may be subject to such conditions as are thought reasonable.

6. The War Office have decided that military rank shall be conferred on the members of the medical staff. If an officer of higher rank than the medical superintendent is sent to the hospital, it is desirable that the general administration of the institution should be delegated to the medical superintendent, or at any rate in practice left in his hands. As regards the male attendants, it may be thought necessary, as has been done at the state institution at Moss Side, to incorporate them in the Red Cross organization.

7. The committee will continue to make contracts for supplies, and otherwise carry on the business side of the administration, will open a fresh banking account from the date when the War Office are in possession, and the clerk will each month present to the War Office an account, certified as the War Office may require, of the expenditure incurred. These accounts will be audited as heretofore by the asylum auditors with any additional precautions which the War Office may require. They should be transmitted to the War Office through the Board of Control who, after such enquiry—if any—as they think neces sary, will append their certificate that the claim is a proper one to be made on the Wa Office.

The committee will be informed by the War Office what stores, etc., can be s that department, and what must be contracted for locally.

The necessary funds to meet expenditure on structural alterations, additional e expenses on travelling and conveyance, etc., will be advanced by the War Office as soon as a decision is reached that an asylum is to be vacated.

Claims for such advances should be transmitted through the Board of Control.

B. USE OF ASYLUMS AS MILITARY HOSPITALS

Observations by the War Office supplementary to their general confirmation of the scheme prepared by the Board of Control:

1. Vacated Asylums

(a) Charges in connection with buildings and equipment:

ii. Maintenance and repairs of premises.

In case of considerable repairs constituting permanent structural improvements, the Board of Control will no doubt be prepared to advise to what extent credit can be given to the War Department for these in the final settlement.

iii. Reinstatement of premises at end of occupation.

It is presumed that a complete inventory will be taken before occupation.

iv. Additional equipment.

It is presumed that complete accounts will be kept of equipment furnished by, or purchased at the expense of, the War Department.

(b) Charges in connection with the maintenance of staff and of soldier patients:

i. Salaries and wages.

It is presumed that the visiting committee will actually pay (at War Department expense) the present salaries of the retained asylum staff, and any persons temporarily engaged, and that the War Department will pay direct its own officials. This is merely a matter of machinery, and will be pursued in the

communication referred to in paragraph 7 below. The rates to be paid for any persons temporarily engaged will be settled by the War Office.

ii. Victualling.

Presumably consumable stores taken over will be valued and the cost credited to the asylum authorities.

It is presumed that appropriate accounts of consumables, etc., whether supplied by the War Department or purchased on their behalf by the asylum authorities will he kept, and that these accounts will be available for inspection, if desired.

Medicines and medical and surgical equipment when not taken over with the asylum will be provided by the War Office or under arrangements approved by them.

Receipts Generally.

It is presumed that the produce of asylum farms will be available for use, and that the War Department will be allowed credit for produce sold. Also the War Department will receive credit for the grants received by the asylum authorities in respect of any harmless patients retained for work on farms or grounds, since they will be maintained out of general maintenance of which the War Department is bearing the cost, and generally that any receipts arising out of the ordinary working of those institutions while they are in use by the War Department will be taken in reduction of the working expenses chargeable against the War Office.

2. Receiving Asylums.

(i) Additional weekly cost of maintenance, if any.

It is presumed that the authorities of the vacating asylum will continue to draw their grants in respect of patients transferred and of patients who would he sent there but for War Department occupation, that the vacating asylum will pay to the receiving asylum the weekly cost of maintenance therein, and that the War Department will refund to the vacating asylum the excess in cases where their grant is less than the weekly cost in the receiving asylum.

In cases in which the weekly cost is less, this department would not propose that the saving should be taken into account unless the saving is of material amount, in which case the charge under (ii) below should apparently he abated.

(ii and iii) Equipment and stores required.

It is presumed that an account will be kept of the additional equipment, and that such equipment may be taken over on evacuation at a valuation as in case of vacating asylum. This department will readily fall in with your views as to the manner of payment for these services.

General Arrangements.

(2) If a portion of the staff is transferred to a receiving asylum, it is presumed that the salaries will not be a charge for the War Department.

(3) After "nursing" in line 1, add "or other."

(4) After "War Office" in line 3, add "under the general officer commanding-in-chief of the command concerned."

(6) Delete the first three lines and substitute, "If the War Office in any given case should appoint an officer of senior rank to the hospital it is desirable that the general. . . ."

(7) It is suggested that when an asylum is taken over, an advance be made by the War Department on the recommendation of the Board of Control on the basis of a month's (or quarter's) estimated expenditure (plus initial costs in the first

instance) and that periodical accounts should be rendered to the War Department through the Board of Control as suggested. A further communication will, however, be addressed to the Board of Control as regards the procedure in rendering accounts, but this department will be prepared to make advances as soon as desired.

"The Board of Control,
66 Victoria Street, S. W.,
10th March, 1915.

Sir:

I am directed by the Board of Control to transmit to you a copy, "A," of the scheme prepared by the board for the general administration of the vacated asylums, and the details of reimbursement which the board suggested the War Office should undertake to make to receiving and vacated asylums.

The board, on the 6th instant, received from the War Office a letter expressing the general concurrence of the Army Council with the detailed financial arrangements mentioned above. A statement was enclosed setting forth some minor points on which it appeared to the Army Council desirable to arrive at a clearer understanding, and on which they thought the statement might perhaps with some advantage be modified. It was also added that the actual details regarding staff requirements, technical equipments, and the like, will be settled by arrangement with the War Office in each particular case.

A copy of the War Office statement—marked "B"—is herewith enclosed. It is to be observed that on page 1, under "Receipts Generally" the view is entertained that the accounts of the farm at the vacated asylum would be included in those of the War Office. The board, however, contemplated that the asylum farms would be managed by the visiting committees; that the accounts would be kept separately from those relating to sick and wounded soldiers; and that supplies of vegetables and other produce to the hospital would be charged for at reasonable prices, say current market rates, and would be debited to the War Office account. Inasmuch as many of the farms are big enterprises with considerable stock (both live and dead) the board think that this course would be preferable and generally more equitable than the alternative of including the entire farm accounts in the accounts for soldiers. The War Office have, however, stated that either of these alternative methods would be agreeable to them; it is a point that easily lends itself to adjustment between now and the date when the asylums are handed over.

The board agree that it would be right that expenditure in respect of harmless lunatic patients retained at the hospital should be charged in the War Office account and that credit should be taken therein of all sums received from guardians in respect of their maintenance. The effect of this arrangement will be that no charge will fall on the War Office.

Under No. 6, on page 2, the board understand that the War Office are prepared to grant military rank to certain members of the medical staff, and that the omission of the words "The War Office . . . Medical Staff" in the first lines was not intended to affect the decision.

With regard to the second paragraph on page 2 commencing "In cases in which the weekly cost is less . . . " the board, as some of their members have explained when this question has come up at conferences, are of the opinion that the Lunacy Act appears to require that not more than the actual cost of maintenance be claimed from the guardians, and if this principle is adhered to the question of an abatement to the War Office—as referred to in this paragraph—will not arise.

The board have given careful consideration to all the points set out in the War Office statement. They are of the opinion that none of them conflicts with any of those in the

board's scheme. The latter was based on the conditions upon which the various asylum authorities so willingly promised their assistance, and the board have confidence that they will agree that the interests of the ratepayers and the position of the visiting committees have been amply and properly safeguarded.

In gladly accepting the offer of the nine asylums to be vacated, the War Office have stated how much they appreciate, not only the willingness of the authorities and staff of those institutions to place them at their disposal, but also the hearty co-operation of the authorities and staff of all the receiving asylums, without which they realize that the scheme would not have been practicable.

I am,
Sir,
Your obedient Servant,
(Signed) O. E. DICKINSON,
Secretary."

The first employment of this plan made about 12,000 beds available. Since then additional institutions under the Board of Control, and under the boards exercising similar functions in Scotland and Ireland, have been taken over for military purposes. On July 1, 1917, twenty-one such institutions with a total capacity for military patients of 27,158, had been made available for the use of the War Office. A list of these institutions showing their capacity as civil institutions and as military hospitals and indicating those which have been used for mental and nervous cases is given on the following page.

In all cases, even where the military hospital was to be used for insane soldiers, the name was changed "to escape the asylum tradition." This is a pathetic reminder of the stigma which still clings to mental diseases and institutions for their care in England. The old names of these institutions with their "asylum traditions" are still good enough for the wives, mothers and daughters of soldiers. It is earnestly hoped by the men in England who are striving to change this popular attitude toward mental illness that, when the war is over, the new names will be retained and the word "asylum" will be permanently replaced by the word "hospital."

The transfer of upwards of 15,000 insane patients was successfully and safely made, although not without distressing incidents. Col. Thomson said that in his institution he was surprised to see the attachment which old patients felt for the place which had been their home for so many years—in some cases from childhood. The other institutions were able to absorb these great additions to their population but only with considerable inconvenience and

County and Borough Asylums which have been Vacated of their Patients and Converted into Military Hospitals, July 1, 1917

Former name (as a civil institution)	Present name (as a military hospital)	Capacity	
		Former	Present
England:			
Newcastle-on-Tyne City Asylum, Gosforth, Newcastle-on-Tyne.	The Northumberland War Hospital.	884	1,179
West Riding of Yorks Asylum, Wadsley (New Sheffield).	The Wharncliffe War Hospital	1,699	2,265
Lancashire County Asylum, Winwick, Warrington.	*The Lord Derby War Hospital	2,248	2,997 (1)
Birmingham City Asylum, Rubery Hill, Birmingham.	The 1st Birmingham War Hospital.	1,397	2,363
Birmingham City Asylum, Hollymoor, Birmingham.	The 2d Birmingham War Hospital.		
Norfolk County Asylum, Thorpe, Norwich.	The Norfolk War Hospital.	1,045	1,393
West Sussex Asylum, Chichester.	The Graylingwell War Hospital.	729	972
Bristol County and City Asylum, Fishponds, Bristol.	The Beaufort War Hospital.	937	1,249
London County Asylum, Horton, Epsom.	The Horton (County of London) War Hospital.	2,174	2,899
Middlesex County Asylum, Napsbury, St. Albans.	†The County of Middlesex War Hospital.	1,800	1,520 (2)
Middlesex County Asylum, near Tooting, London, S.W. (block for defective children).	*The Springfield War Hospital.	250	278
Northampton County Asylum, Berrywood, Northampton.	Northamptonshire War Hospital.	997	1,329
The Maudsley Hospital, Denmark Hill, London, S.E.	‡Part of the 4th London General Military Hospital.	(3)	200
Lancashire County Asylum, Whalley.	Queen Mary Military Hospital.	(4)	3,000
Hampshire County Asylum, Park Prewett.	Park Prewett War Hospital.	(4)	1,000
Moss Side State Institution, Maghull (near Liverpool).	*Moss Side Red Cross Military Hospital.	(5)	345
London (Manor) County Asylum, Epsom.	Manor (County of London) War Hospital.	1,085	1,447
Wales:			
Cardiff City Asylum, Whitchurch, Cardiff.	The Welsh Metropolitan War Hospital.	729	972
Scotland:			
Renfrew District Asylum, Paisley.	†The Dykebar War Hospital.		850
Perth District Asylum.	†The Murthley War Hospital.	(?)	400
Ireland:			
The Belfast District Asylum, Belfast.	†The Belfast War Hospital.	(?)	500

* For nervous cases. † For mental cases. ‡ For mental and nervous cases.

(1) 1,000 beds for mental cases. (2) 350 beds for mental cases, (3) New psychopathic hospital; never occupied. (4) New institution for the insane; never occupied. (5) New institution for mentally defective delinquents; never occupied.

some hardships. A few patients were taken home by their friends. Partly as a result of the inability of the overcrowded institutions to take new cases except in emergencies and partly as a result of the reluctance of relatives to send patients to distant institutions, the admission rate from the civil population of England, Scotland and Ireland has shown a considerable reduction. In the United States we have ample evidence of the effect upon the admission rate of the standard of care provided by public institutions and have seen how easy it is, in states which shirk their responsibilities in this matter, to force the insane back upon their homes. In many of the hospitals from twenty to eighty of the quiet male patients able to work remained—usually in detached villas. Such patients are happy and carry on the work with which they are familiar in the novel surroundings of a military hospital.

The total cost of turning over these institutions was not ascertained. In the case of the Norfolk Asylum it was $90,000.00.

The capacity of the institutions was almost invariably increased, the average ratio being 4:3. This is due to the fact that most of the day rooms could be used as wards and dormitories, so large a proportion of medical and surgical patients being bed patients.

A revolution came into the lives of the personnel of these institutions. The medical superintendents, with one exception, were left in charge of their institutions, receiving commissions as lieutenant colonel or major (temporary) in the Royal Army Medical Corps. Some of the junior physicians who were commissioned in the Army were retained at their hospitals. A way of "doing their bit" was provided for the male attendants through their enlistment in the Royal Army Medical Corps under a special arrangement. This solved for the superintendents the perplexing problem of keeping their employees. Responsible employees became non-commissioned officers, and some helpers, ineligible for military service, were retained as civilian employees. The female attendants became probationers in the nursing corps. In most cases the change was satisfactory. Many of the younger women have been attracted by the work of general nursing and will probably complete their training after the war. All will be better attendants for the training they have received. In the case of a few older female attendants who had not had the ad-

vantage of a regular nurses' training but had filled places of responsibility, some friction developed. The general spirit, however, has been that of hearty good-will in the new work. This has been due in large measure to the great part which the war has come to play in the lives of Englishmen and Englishwomen and the deep feeling of obligation to serve their country which inspires people in all stations of life. It is very doubtful if such an enormous and difficult task as the conversion of these institutions to another purpose could have been successfully accomplished without patriotic submergence of self-interest by officers and employees.

In the institutions which are used as military hospitals for mental cases (see list, p. 87) the changes made were less radical. The War Office agreed to pay each member of the staff his normal salary except in the few instances in which this was less than the compensation of the new rank, in which case the latter amount was paid. The female attendants presented a difficult problem in these hospitals, as female attendants are not yet generally employed in male wards in English hospitals for mental diseases. In one hospital (Dykebar) it was found possible to staff several wards with female nurses although a male orderly is on duty in each. Bed cases are cared for in this hospital by female nurses. A detached villa for convalescent patients is entirely in charge of female nurses. Another villa in this hospital was entirely staffed with female nurses but the type of patients was not just suitable and further complications arose from the fact that the charge nurse married a patient upon his discharge and this interfered with conditions apparently necessary for good discipline. Other wards in the hospital have female nurses and they are assigned to the distribution of food. At night the whole institution is under an assistant matron who has three female assistants, a sergeant and ten male orderlies. One outcome of the conversion of the institutions seems likely to be the employment of female nurses in men's wards in civil institutions in England. No one who has seen the success with which this is done in the United States and its rapid extension as a result of its efficiency and the increasing difficulty of securing good male attendants will regret it.

The impression one gets in visiting the military hospitals which

have been created out of civil institutions for the insane is that an enormously difficult task has been accomplished in a wonderfully efficient way. Great credit for this is due to the Board of Control for the thoughtful planning of the transfer in advance, but its success is due also to the remarkable unanimity with which visiting committees, medical superintendents and employees co-operated in removing obstacles and subordinating all other considerations to the successful solution of the entirely unprecedented problem before them. Most of the institutions are of the cottage type with many small detached buildings. They have proved exceedingly desirable general hospitals and it is doubtful whether any other institutions in England would have provided such excellent facilities for ill and wounded soldiers. Nevertheless one's thoughts turn to the helpless insane, never too well provided for, who were turned out of their hospitals and whose comfort as well as chances for recovery must have been seriously impaired by the change. The necessity was so great that these considerations could not be taken into account. If similar pressure comes to the United States and the interests of the insane or any other helpless group must be subordinated to the great object of winning the war, we shall have no choice, but we cannot help feeling that the task of vacating half the beds in the state hospitals of a state like New York would be undertaken with a heavy heart by those who know the needs of the insane, and who realize how little they share, even in time of peace, in the provisions which mitigate the sufferings of other ill persons.

APPENDIX III

SPECIAL MILITARY HOSPITALS FOR MENTAL DISEASES AND WAR NEUROSES ("SHELL SHOCK") IN GREAT BRITAIN AND IRELAND

1. DIRECTORY
2. DESCRIPTIONS OF INSTITUTIONS VISITED

APPENDIX III

SPECIAL MILITARY HOSPITALS FOR MENTAL DISEASES AND WAR NEUROSES ("SHELL SHOCK") IN GREAT BRITAIN AND IRELAND

1. DIRECTORY

The hospitals in the following list and descriptions are all special hospitals for the treatment of mental diseases and war neuroses. Neurological departments in general hospitals, as those in the Royal Victoria Hospital, Edinburgh, and the territorial hospitals in England, Scotland and Wales, are not included. The Royal Victoria Hospital, Netley, is included on account of the fact that the department is a clearing hospital.

ENGLAND

Present name: County of Middlesex War Hospital
Former name: Middlesex County Asylum
Location: Napsbury (near St. Albans)
Name dept. for ment. or nerv.: No special name
Classes of cases received: Mental diseases (no officers)
Officer in charge of ment. or nerv. dept.: Lt. Col. (T.) L. Rolleston
Capacity:

Mental disease	350
War neuroses	...
Total	350

Present name: The First Home of Recovery (Branch of Maida Vale Hospital for Nervous Diseases)
Former name: "Highfields" (a girls' school)
Location: Golder's Green, London
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: War neuroses (pensioners only)
Officer in charge of ment. or nerv. dept.: Capt. (T.) — Scott
Capacity:

Mental disease	...
War neuroses	150
Total	150

Present name: Fourth London General Hospital
Former name: Kings College Hospital and Maudsley Hospital
Location: Denmark Hill, London
Name depts. for ment. or nerv.: "Maudsley Hospital" } clearing
"Maudsley extension" } hospital
Classes of cases received: War neuroses (officers included)
Officer in charge of ment. or nerv. dept.: Major (T.) F. W. Mott, R.A.M.C.
Capacity:

Mental disease	27
War neuroses	447
Total	474*

Present name: Granville Canadian Special Hospital†
Former name: Granville Hotel
Location: Ramsgate
Name dept. for ment. or nerv.: "Medical Department"
Classes of cases received: War neuroses (no officers)
Officer in charge of ment. or nerv. dept.: Major Colin Russell, C.A.M.C.
Capacity:

Mental disease	...
War neuroses	440
Total	440

Present name: Letchmere House
Former name: A private institution
Location: Ham Common, London
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: Mental diseases (officers only)
Officer in charge of ment. or nerv. dept.: Major (T.) N. H. Oliver, R.A.M.C.
Capacity:

Mental disease	50
War neuroses	..
Total	50

*200 in Maudsley Hospital.
†To be abandoned and patients sent directly to Canada.

Present name: Lord Derby War Hospital
Former name: Lancashire County Asylum
Location: Warrington (near Liverpool)
Name dept. for ment. or nerv.: No special name
Classes of cases received: Mental diseases (no officers)
Officer in charge of ment. or nerv. dept.: Lt. Col. (T.) Alexander Simpson, R.A.M.C.
Capacity:

Mental disease	1,000
War neuroses	.....
Total	1,000

Present name: Red Cross Military Hospital
Former name: Moss Side State Institution
Location: Maghull (near Liverpool)
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: War neuroses (Annex for 31 officers)
Officer in charge of ment. or nerv. dept.: Major (T.) R. G. Rows, R.A.M.C.
Capacity:

Mental disease	...
War neuroses	377
Total	377*

Present name: Royal Victoria Hospital
Former name: Same
Location: Netley
Name dept. for ment. or nerv.: "D Block" for mental diseases; "Neurological Wards" for war neuroses
Classes of cases received: Mental diseases and war neuroses (including officers)
Officer in charge of ment. or nerv. dept.: Major (T.) C. Stanford Ross, R.A.M.C. for "D Block" and Major (T.) A. W. Hurst, R.A.M.C. for "Neurological Wards."
Capacity:

Mental disease	128
War neuroses	113
Total	241

*Including 31 beds for officers in annex.

Present name: Special Hospital for Officers
Former name: A private home
Location: 10–11 Palace Green, London
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: Mental diseases and war neuroses (officers only)
Officer in charge of ment. or nerv. dept.: Major (T.) J. C. Wood, R.A.M.C.
Capacity:

Mental disease	10
War neuroses	73
Total	83

Present name: Springfield War Hospital
Former name: Department of Middlesex County Asylum
Location: Upper Tooting, London
Name dept. for ment. or nerv.: Springfield War Hospital
Classes of cases received: War neuroses (no officers)
Officer in charge of ment. or nerv. dept.: Major (T.) Reginald Worth, R.A.M.C.
Capacity:

Mental disease	...
War neuroses	255
Total	255

SCOTLAND

Present name: Craiglockhart War Hospital
Former name: "Edinburgh Hydropathic" (a private institution)
Location: Slateford (near Edinburgh)
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: War neuroses (officers only)
Officer in charge of ment. or nerv. dept.: Major (T.) W. H. Bryce, R.A.M.C.
Capacity:

Mental disease	...
War neuroses	174
Total	174

Present name: Dykebar War Hospital
Former name: Renfrew District Asylum
Location: Paisley
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: Mental diseases (no officers)
Officer in charge of ment. or nerv. dept.: Major (T.) R. D. Hotchkis, R.A.M.C.
Capacity:

Mental disease	500
War neuroses	...
Total	500

Present name: Dykebar War Hospital Annex
Former name
Location: Paisley
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: Mental diseases (no officers)
Officer in charge of ment. or nerv. dept.: Major (T.) R. D. Hotchkis
Capacity:

Mental disease	350
War neuroses	...
Total	350

Present name: Murthley War Hospital
Former name: Perth District Asylum
Location: Perth
Name dept. for ment. or nerv.: Whole hospital utilized
Classes of cases received: Mental diseases (no officers)
Officer in charge of ment. or nerv. dept.: Major (T.) Lewis Bruce
Capacity:

Mental disease	350
War neuroses	...
Total	350

IRELAND

Present name: Military Hospital
Former name: Belfast County Asylum
Location: Belfast
Name dept. for ment. or nerv.: *
Classes of cases received: Mental diseases and war neuroses
Officer in charge of ment. or nerv. dept.: *
Capacity:

Mental disease	500
War neuroses	*
Total	*

2. DESCRIPTIONS OF HOSPITALS VISITED

Descriptions of special hospitals with detailed accounts of their work cannot be given in the copies of this report which are to be generally distributed, as these hospitals were visited, with the official consent of the British War Office, for the sole purpose of making observations likely to be useful to American military hospitals of similar character.

*Unascertained.

APPENDIX IV

FACILITIES NEEDED FOR EFFICIENT TREATMENT OF MENTAL DISEASES IN A MODERN PUBLIC INSTITUTION

APPENDIX IV

FACILITIES NEEDED FOR EFFICIENT TREATMENT OF MENTAL DISEASES IN A MODERN PUBLIC INSTITUTION

FOR the treatment of any class of the sick these fundamental provisions are required: sanitary housing, good food, good clothing, skill, kindliness and appreciation of the aims of the hospital on the part of all those charged in any way with the care or supervision of patients. These fundamental provisions must be made effective by a sound administrative system, free from political or other selfish control, in which the medical and scientific purposes of the hospital are primary considerations. With these provisions constituting the absolutely essential ground work for the treatment of any class of the sick, the following may be stated to constitute the facilities needed for the modern treatment of mental diseases in a public institution for the insane:

1. Direction of the administration of the hospital and leadership in its medical work by a physician trained in the diagnosis and treatment of mental diseases.
2. An adequate medical staff, organized so that duties are divided in accordance with the training of its different members and with the requirements of the clinical work.
3. Regular and frequent conferences of the medical staff at which the diagnosis, treatment and prognosis of each new case admitted are considered and at which cases about to be discharged are presented, training in psychiatry for new members of the staff being considered a special object.
4. The reception of all new cases in a special department or in special wards where they may receive careful individual study and where those with recoverable psychoses may receive continuous individual treatment.
5. Classification of all patients with reference to their special needs and their clinical condition, such classification being flexible enough to permit frequent changes.
6. A system of clinical records which permits study and review of the history of cases even after they have been discharged.
7. A laboratory in which some of the more useful tests required for the study and diagnosis of mental diseases as well as for

those required in general clinical diagnosis can be made and in which pathological material can be studied.

8. Provision for special treatment such as hydrotherapy and electrotherapy.
9. Provision for examination and treatment by dentists, opthalmologists, gynecologists, and other specialists.
10. An adequate number of trained nurses and the maintenance of a school for nurses, under the direction of a supervisor of nurses who should have not only training in general nursing but special training in nursing patients with mental diseases.
11. The employment of female nurses in the reception and infirmary wards for men.
12. The systematic use of occupations, for their therapeutic effects under the direction of workers specially trained for this duty.
13. Special attention to recreation and diversion, with reference to their therapeutic value.
14. Liberal use of parole especially for quiet, chronic patients who can live in farmhouses.
15. Special provision for the tuberculous.